FEBRUARY 1, 1953

MODERN MEDICINE

The Journal of Diagnosis and Treatment

Dr. C. S. Cameron
(see page 11)

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Safe, gradual, prolonged vasodilation

Isn't that what you want for your hypertensive patients?

Nitranitol provides it . . . permitting hypertensives to resume more normal lives.

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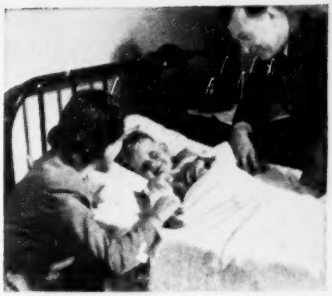
*alkavervir



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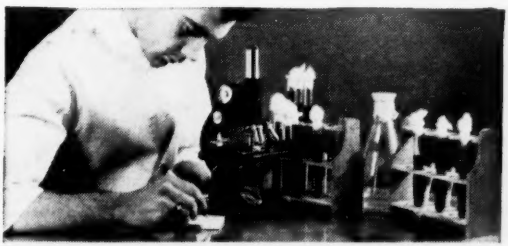

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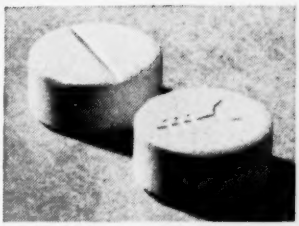

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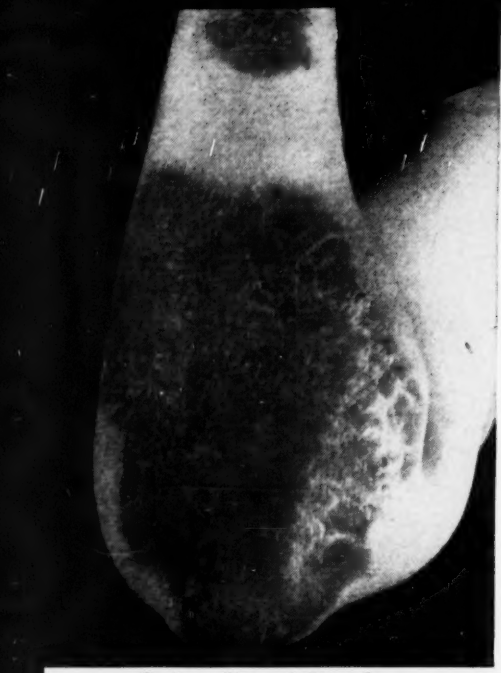

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THE JOURNAL OF DIAGNOSIS AND TREATMENT

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*Brunt, A. D., Jr.: Med. Clin. North Amer. 36:1607, Nov. 1952

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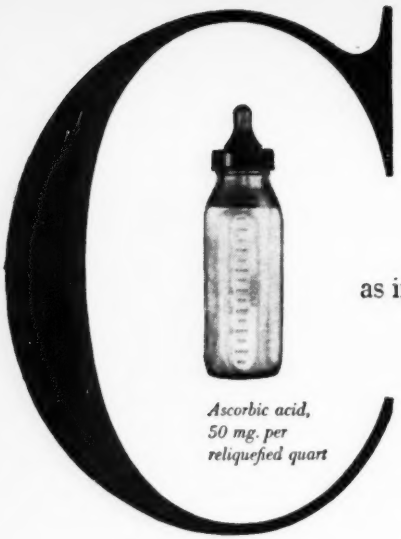

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1. Tisdall, F. F., and Jolliffe, N., in Clinical Nutrition, New York, P. B. Hoeber, 1950, c. 23, p. 590. 2. Sealock, R. R., and Goodland, R. L.: Science *114*:645 (Dec. 14) 1951.

in hypertension

TURASED

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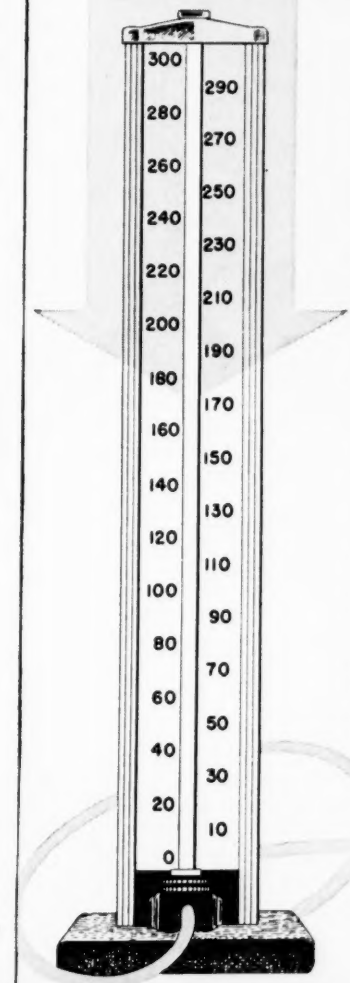

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1. Parsonnet, A. E., et al.: J. M. Soc. New Jersey 47:504, 1950.

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for

February 1

1953

Modern Medicine

Vol. 21, No. 3

THE MAN ON THE COVER is Dr. Charles S. Cameron of New York City, Medical and Scientific Director of the American Cancer Society. In 1948 Dr. Cameron established a program of clinical fellowship, awarding one year's training in cancer diagnosis and treatment. Editor of *CA—A Bulletin of Cancer Progress* and special consultant to the Cancer Control Grants Section of the National Cancer Institute, Dr. Cameron is clinical assistant surgeon at Memorial Hospital and clinical assistant visiting surgeon at James Ewing Hospital. He is chairman of the Cancer Committee of the American College of Surgeons and of the Program Committee of the New York Cancer Society. The report on page 85, "Early Diagnosis of Cancer," is based on an article by Dr. Cameron that appeared in the *New York State Journal of Medicine*.

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Contents for February 1 1953

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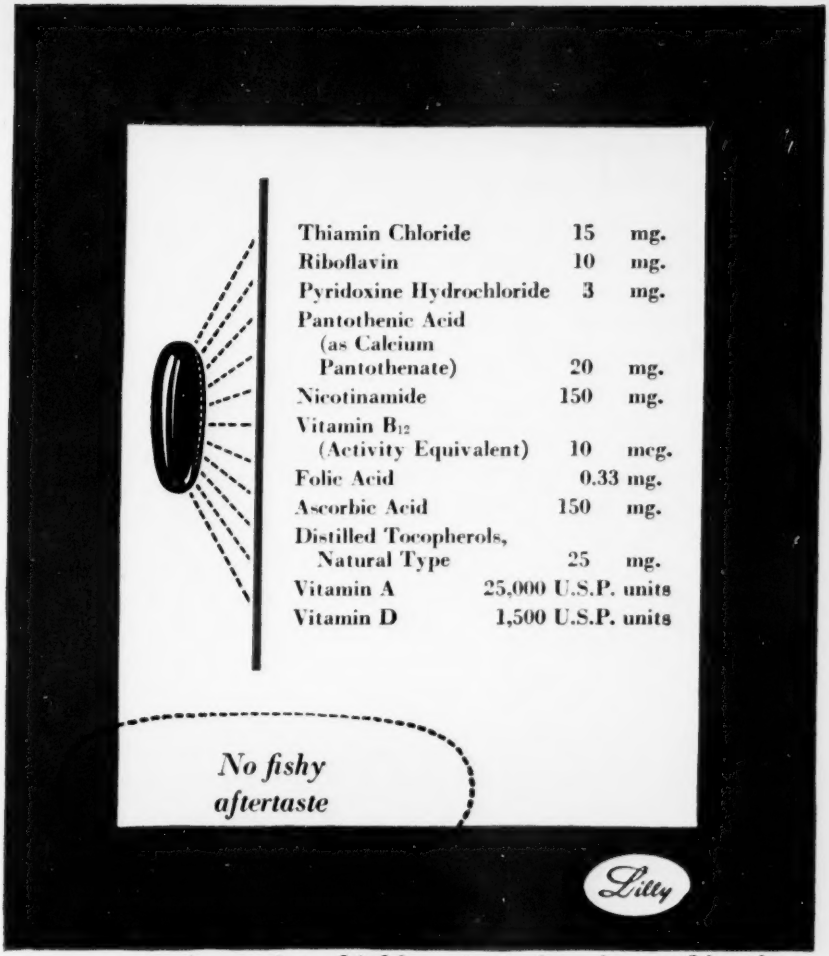

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LETTER FROM THE EDITOR

Dear Reader:

Last fall I read a headline in my newspaper which suggested that a "cure" for schizophrenia was at hand. Big news, certainly, and I wondered how I had happened to have missed the account in my medical reading. In endeavoring to track the story down I discovered that the only publication was in the newspapers.

As so often is the case, the newspaper story did not quite measure up to the headline. But where there is smoke there must be some fire.

My fellow editors, too, thought that more information on the matter was desirable. One of our science writers was assigned to the task of investigation. The results are published on page 158 in the article, "What Are the Facts about Isoniazid for Schizophrenia?"

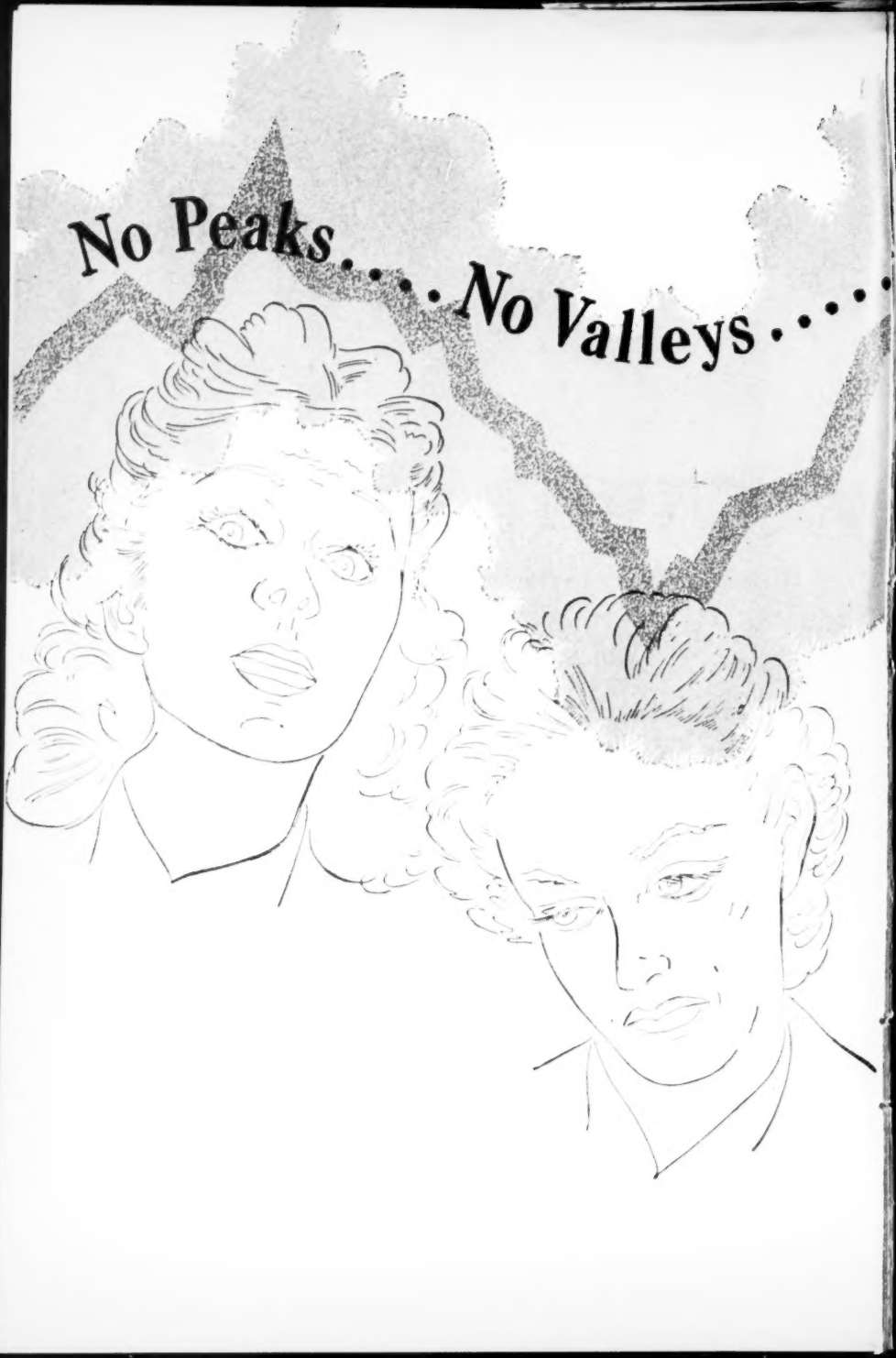
Thus another nugget of information is added to the store of the regular reader of *Modern Medicine.*

The schizophrenia report is one more instance, but not an unusual one, of editorial enterprise directed to the end that the reader will be well informed about every significant development in medicine.

With *Modern Medicine's* distinguished group of 58 physicians actively seeking information that will be interesting and valuable to the practitioner, there is every assurance that each issue will well repay the reader for his few minutes of reading time.

Walter C. Alvarez

EDITOR-IN-CHIEF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Correspondence

Communications from the readers of MODERN MEDICINE *are always welcome. Address communications to The Editors of* MODERN MEDICINE, *84 South 10th St., Minneapolis 3, Minn.*

Put to Good Use

TO THE EDITORS: This is just a brief note to tell you how wonderful it is to come upon issues of *Modern Medicine.*

My work as medical field superintendent for foreign missions carries me to all parts of the world, so it is only occasionally that I have the privilege of seeing one of your issues.

I might tell you that, as a result of the article on low spinal anesthesia in vaginal delivery by Dr. William G. Caldwell, published in *Modern Medicine* some months ago (Apr. 1, 1952, p. 97), most of our faraway installations are utilizing this excellent procedure to good advantage. It has been a boon to all of our hospitals where an M.D. is present for administering the anesthetic.

We have had occasion to use other suggestions printed in *Modern Medicine.*

I am leaving in two days for India for a supervisory inspection of units located there, so I hope that I will be able to see an occasional issue of *Modern Medicine.* You would be surprised at the many strange places it pops up.

Keep up the good work.

JAMES BURTON WEEKS, M.D.
Hollywood, Calif.

For the Record

TO THE EDITORS: I thought you might be interested to know that the method of cutting full-thickness skin grafts credited to Dr. Heinz Gelbke of Göttingen, Germany *(Modern Medicine,* Nov. 15, 1952, p. 90) has been used by Dr. John Royal Moore of the Shriners Hospital, Philadelphia, for at least twelve years to my knowledge, probably much longer.

JOHN T. EALY, M.D.
Philadelphia

Ganglionic Blocking Agent

TO THE EDITORS: In your Questions & Answers section (Dec. 1, 1952, p. 46) an M.D. from Texas asks about treatment for postherpetic neuralgia. In the March 15, 1952 number of *Modern Medicine* (p. 79) there is a report by Drs. Brown, Reekie, and Sinclair on the use of ganglionic blocking agents in herpes. I also wish to add that just a few days ago I saw a patient who had had postherpetic neuralgia for two years. I placed him on Banthine and within six hours he had over 50% relief of pain.

There is no doubt in my mind that ganglionic blocking agents are the most valuable therapy we have today in the treatment of acute

(Continued on page 24)

Phenaphen®

with Codeine

¼ GR. OR ½ GR.

Robins

Provides full codeine effect with small, safe codeine dosage — by synergistic combination with the potent, non-narcotic Phenaphen formula*.

A complete analgesic for control of pain, and of the patient's emotional reaction to pain.

Three forms:

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Each tablespoonful (15 cc.) contains:
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joint and muscle pain relieved with

ARTHRALGEN®

supplies:

arthralgesic unguent

1-oz. tubes and 8-oz. jars.

vasodilation
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bafaction
thymol 1%

analgesic
methyl salicylate 15%—menthol 10%

herpes zoster or postherpetic neuralgia. I would urge other physicians to try these agents and I would appreciate hearing from them as I wish to compile as many case reports as possible. To date, I have a series of about 12 patients in whom Banthine or Prantal was of value. In fact, if these agents do not work, one must question the original diagnosis or evaluate more closely the psychosomatic motives of the patient.

HUGH S. BROWN, M.D.

Spokane

Cerebral Vessel Spasm

TO THE EDITORS: In Diagnostix Case MM-225 (*Modern Medicine*, Oct. 15, 1952, p. 162) the visiting physician makes the following statement: "Evidence is appearing that cerebral vessels are capable of little if any spasm."

The evidence to which the Visiting M.D. refers has escaped us. Since this statement appears in a paragraph which brings up the old argument of whether spasm can only follow thrombosis, perhaps I have misconstrued the meaning of this sentence. Perhaps it should not be taken out of context. I would be interested in the references which contain this evidence.

R. H. ROBERTS, M.D.

Summit, N. J.

¶ The author of our Diagnostix Case MM-225 was sent Dr. Roberts' query. The following letter was the result.—Ed.

► TO THE EDITORS: With regard to Dr. Roberts' query about cerebral vasospasm, I believe the statement concerning cerebral vessel spasm which he quoted could bet-

(Continued on page 28)

when she's Imprisoned by FATIGUE

. . . you may free her from iron-deficiency anemia by the simple expedient of prescribing one IBEROL tablet t.i.d.

As you can see by the formula, three IBEROL tablets provide a therapeutic dose of iron plus seven B complex factors including B_{12}. In addition, IBEROL supplies standardized stomach-liver digest and ascorbic acid.

Compressed, triple-coated IBEROL tablets are easy to take with no trace of liver odor or taste. The outer sugar-coating masks the iron, gives the tablet a pleasant odor and flavor.

For prophylaxis in pregnancy, old age or convalescence, one or two tablets are usually enough. May be used as a supplemental hematinic in pernicious anemia. IBEROL is available in bottles of 100, 500 and 1000. Abbott

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Plus these nutritional constituents:	
Thiamine Mononitrate (6 times MDR*)	6 mg.
Riboflavin (3 times MDR*)	6 mg.
Nicotinamide (2 times RDA†)	30 mg.
Ascorbic Acid (5 times MDR*)	150 mg.
Pyridoxine Hydrochloride	3 mg.
Pantothenic Acid	6 mg.
Vitamin B_{12}	30 mcg.
Folic Acid	3.6 mg.
Stomach-Liver Digest	1.5 Gm.

*MDR—Minimum Daily Requirement
†RDA—Recommended Daily Dietary Allowance

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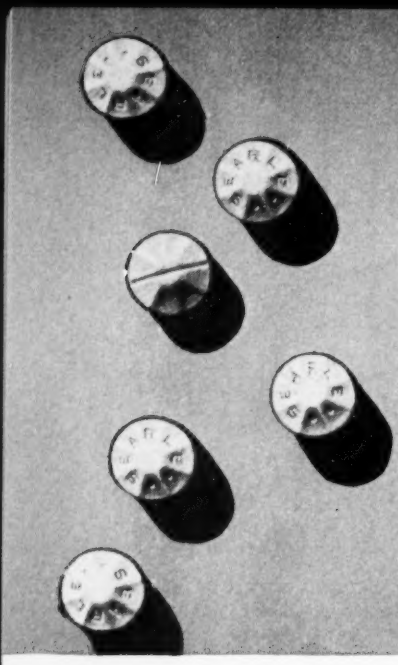
(Iron, B_{12}, Folic Acid Stomach-Liver Digest, With Other Vitamins, Abbott)

1-98



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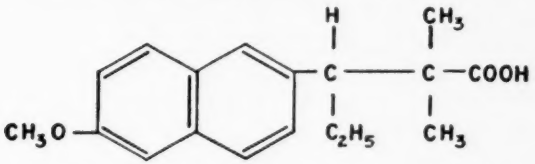
G. D. Searle & Co. presents VALLESTRIL...



as an effective estrogenic substance with a *strikingly low incidence* of these undesirable side effects.

Vallestril is available in 3 mg. scored tablets. For treatment of the physiologic or artificial menopause—3 mg. (one tablet) twice daily for two weeks. Then a maintenance dose of one tablet daily for an additional month or longer if symptoms require continued administration.

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**Trademark of G. D. Searle & Co.*

ter read: "Evidence is at hand that cerebral vessels are capable of only mild spasm, probably insufficient to cause acute or chronic hypertensive encephalopathy." This is what the Visiting M.D. was attempting to say.

Actually, Forbes and Wolff long ago demonstrated that cerebral vessels are under vasomotor nervous control *(Arch. Neurol. & Psychiat.* 19:1057, 1928). However, as the diagram in Forbes et al. demonstrates, the degree of constriction which occurs in cerebral vessels is feeble compared to that occurring in vessels of the skin *(Arch. Neurol. & Psychiat.* 30:957, 1933).

As Dr. Roberts suggests, lifting the sentence out of context weakens it considerably. Actually, the Visiting M.D. is disagreeing with the statement just made by the Attending M.D. to the effect that hypertensive patients have cerebral symptoms upon the basis of cerebral vasospasm. Recall that the Attending M.D. considered the patient hypertensive (probably erroneously).

The Visiting M.D. apparently goes along with the opinion of Dr. George W. Pickering of England, who feels that hypertensive encephalopathy is due to multiple small thromboses rather than to episodes of cerebral vasospasm. Hence his statement, tending to discount the importance of cerebral vasospasm.

(Continued on page 32)

the new

WELL-TOLERATED

wide-range antibiotic

Available in 100-mg. specially coated tablets in bottles of 36.

DOSAGE:

Adults—Total daily doses of 400 to 2,000 mg. are recommended, depending on the type and severity of the infection. Lobar pneumonia, bronchopneumonia, and some of the milder types of respiratory infections caused by organisms susceptible to 'Ilotycin' have consistently responded to doses of 100 mg. every four to six hours.

For other infections, larger doses of 300 to 500 mg. every six to eight hours should be employed.

Children—6 to 8 mg. per Kg. of body weight every six hours.

Therapy should be continued for at least forty-eight hours after the temperature has returned to normal and acute symptoms have subsided.

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'Ilotycin' is a powerful antibacterial of proved effectiveness* in the treatment of infections due to:

ORGANISMS	INFECTIONS
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2. Hemolytic streptococci	Cellulitis, erysipelas, peritonsillar abscess, pharyngitis, pneumonia, scarlet fever, septic sore throat, tonsillitis, wound infections
3. Pneumococci	Empyema, lobar pneumonia
4. Corynebacterium diphtheriae	Diphtheria carriers
5. Nonhemolytic streptococci	Some cases of endocarditis, genito-urinary tract infections

*References

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Actually, the evidence is not "appearing" but, rather, new interpretations of previous data are being voiced (Pickering, G. W. *Symposium on Hypertension: Cerebral Attacks in Hypertension.* University of Minnesota Press, Minneapolis, 1951).

Incidentally, the syndrome due to obliterative atherosclerosis of the internal carotid artery appears to be quite generally accepted (Denny-Brown, D. E. *New England J. Med.* 246:839-846, 1952).

Addled Anatomy

TO THE EDITORS: In the article "Vesicoureteral Reflex in the Paraplegic" (*Modern Medicine*, Nov. 15, 1952), I find what I believe to be a misprint. The last sentence on page 148 reads in part as follows: "Through a midline suprapubic incision, the periosteum is reflected upward from the anterior surface of the bladder." Should the word "periosteum" not be "peritoneum"?

JOHN H. SCHAEFER, M.D.
Los Angeles

¶ It should.—Ed.

Filling the Gap

TO THE EDITORS: Your special article, "Obesity and Diet Control" (*Modern Medicine*, Nov. 15, 1952, p. 74), is informative and interesting. But with the sections on the psyche and psychologic factor the article bifurcates itself and the following criticism is an attempt to fill the gap. There are reasons for this type of medical writing.

Some years ago certain moralistic physicians hesitated or refused to treat syphilitics. A change in social attitudes has occurred so that the doctor-patient relation in syphilology is different today. However, there is still a derisive, rejecting attitude toward mental illness and this comes from the public, the ill, and, most unfortunately, some physicians and even some psychiatrists. Why? The problem reflects a cultural demand in which fitness and prospering independence is highly valued and which, in turn, makes the unfit, the poor, and the dependent neurotic a social failure.

A second, often overstated problem—the error of dualism—arises from the failure of psychiatrists to educate the medical profession and to bring it up to date. Too many medical school lectures are research-oriented or deal with theoretic jargon, the result being that the medical graduate has developed a permanent psychiatric tin ear or a naïve belief that drugs will some day "cure" all emotional discomfort and human malevolence. The pertinent point is that modern psychiatric treatment is not done through interference with the brain or through some verbal hocus-pocus on the psyche. The primitive assumption that mental illness is "in the head" illustrates the mind-body dualism which the word "psychosomatic" has not corrected.

Perhaps an analogy is needed to show the real meaning of a psychiatric "disease." The state of compensatory polycythemia at high altitudes represents (oversimplified) an interaction between low oxygen tension and the bone marrow. If we could personalize this relation-

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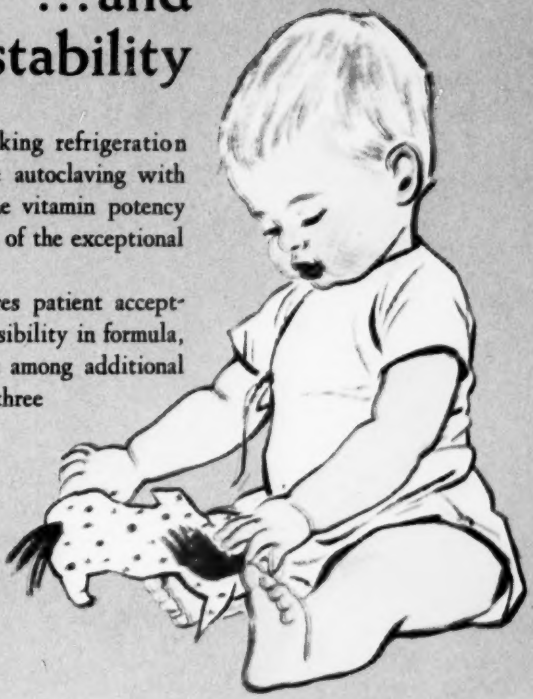

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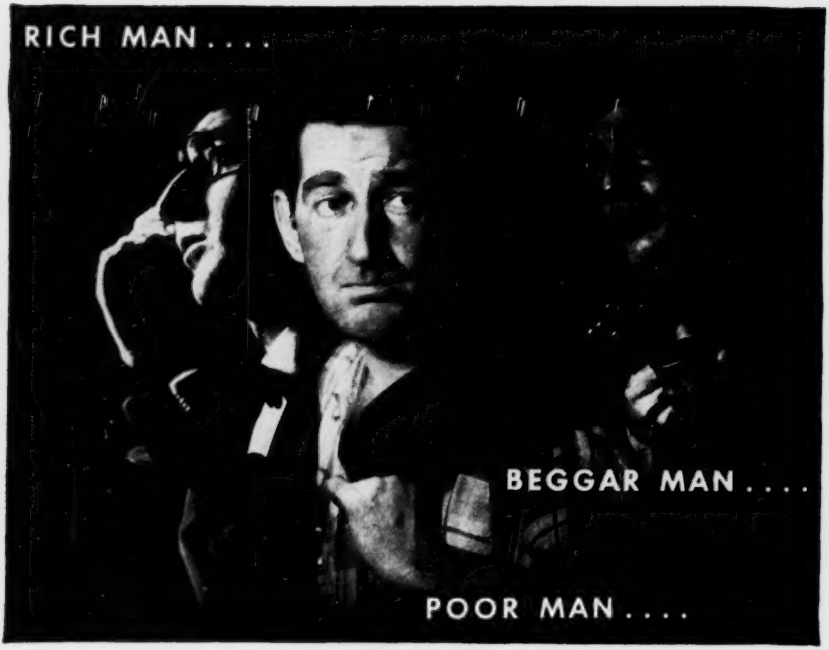
ship we might say that the bone marrow adapted itself to the situation. A description of bone marrow alone or of the mountain air alone does not define the nature of the process. Now if the marrow returned to low altitudes and it perversely continued to be overreactive, we might say that the souped-up bone marrow acted *as if* it were up in the mountain. This maladaptation is not physiologic and is the essence of the disorder.

The reaction of the woman (p. 80) who was deprived (over-hungry) when poor, and then overcompensated (overate) when rich, is a psychologic maladaptation (unrealistic) and constitutes an emotional disorder. The marrow-oxygen tension relation is represented in psychiatry by a person-persons relation which is complicated by biologic, chemical, psychologic, social, and temporal factors.

This could be merely mechanistic (thinking machines don't get a kick out of it) if it were not for the fact than an element of love or mutual respect enters into productive or therapeutic personal relations. The obese woman in Dr. Barach's article unburdened herself because of her trust in a physician who had empathy, and unwittingly the author did psychotherapy, though some would, in perfidy, deny this. Sometimes a single such new experience is the emotional turning point in the life of a neurotic. This point seems to be little stressed in explaining what psychiatry is about.

A third concept which is disturbing is that of "cure." Medical criteria do not apply to psychiatry

(Continued on page 36)



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because symptoms vary in meaning from patient to patient. Moreover, emotional difficulties are merely quantitative for we are all like schizophrenics when we dream, or like delinquents when we exaggerate, or like hysterics when we can't face the boss. If a psychiatrist should dispense digitalis tablets to patients complaining of shortness of breath and then should, with false assurance, tell them that they did not need to see a cardiologist, would this outrage continue? But the internist who derides the psychiatrist and the neurotic does this in principle.

Finally, it is true that psychosomatic books have not statistically solved the problems, but neither has the internist in the article who reports 90% failures. Perhaps the two should get together.

GABRIEL D'AMATO, M.D.
New York City

Answer Correct

TO THE EDITORS: The first question under Questions & Answers in the November 1, 1952 issue of *Modern Medicine* (p. 36) concerns the transmission of pinworms from a pet dog to human beings.

The answer given is correct. Dogs do not have pinworms. The dog in question is passing tapeworm segments.

J. E. SEVERIN, D.V.M.
Atlanta

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Questions & Answers

All questions received will be answered by letter directed to the petitioner; questions chosen for publication will appear with the physician's name deleted. Address all inquiries to the Editorial Department, MODERN MEDICINE, *84 South Tenth Street, Minneapolis 3, Minnesota.*

QUESTION: Is it good practice to use the same platinum needle and syringe on successive patients when performing intradermal tuberculin tests if the needle is sterilized by flaming to a dull red between each injection? What is the possibility of transmitting virus hepatitis by such means?

M.D., California

ANSWER: *By Consultant in Diseases of the Chest.* The same platinum needle and syringe may be used on successive patients if the needle is sterilized after each use by flaming to a dull red. No danger of transmitting virus hepatitis exists if the tuberculin is kept sterile.

QUESTION: What is the latest therapy for an infantile uterus?

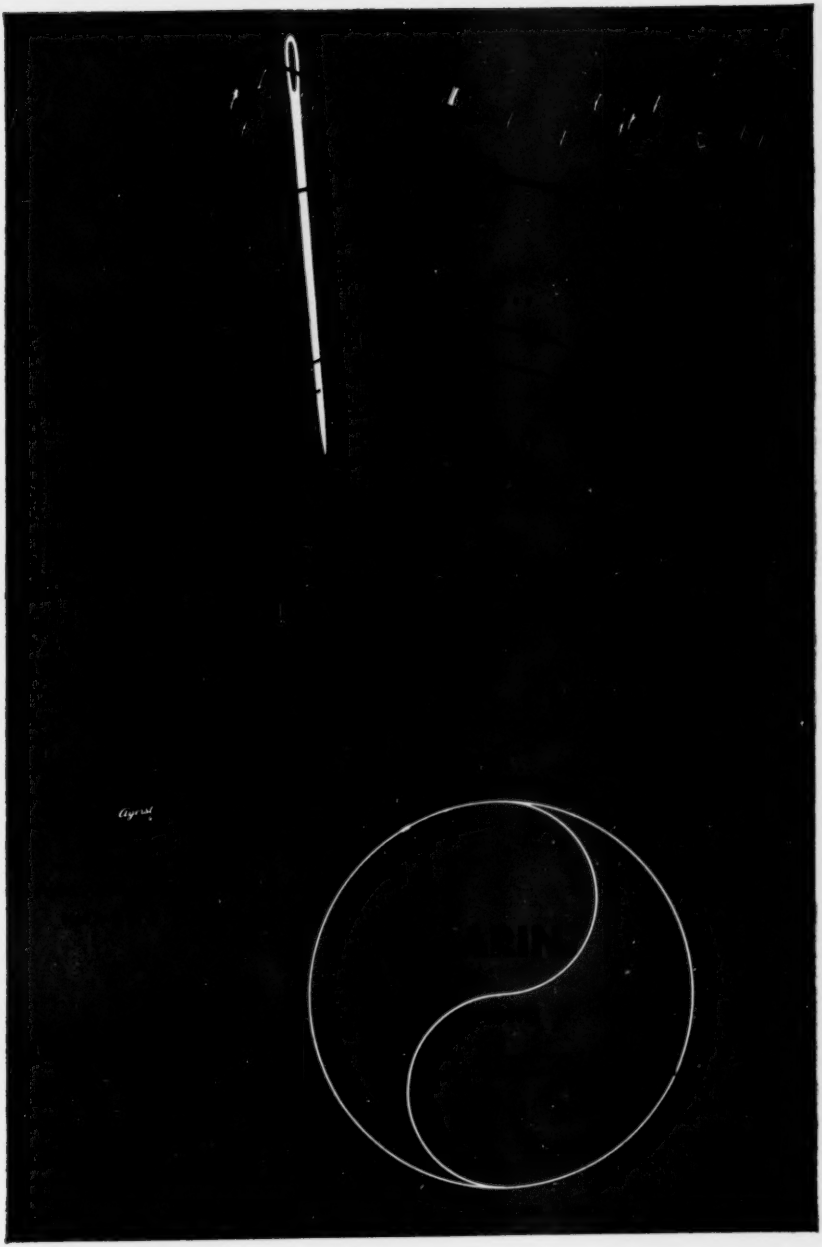
M.D., New York

ANSWER: *By Consultant in Obstetrics.* An infantile uterus is capable of spontaneous growth as late as the third decade. Powerful estrogens have been used to stimulate growth. Use of intrauterine pessaries has been recommended but carries the danger of pelvic infection. Stilbestrol built up to a dosage of 5 mg. daily for three months will usually enlarge the uterus and may permit pregnancy after the drug is stopped. Natural estrogens in equivalent dosage may be better tolerated. If pregnancy ensues, the patient should be placed on the Smith and Smith regime which consists of gradually increasing the dosage of diethylstilbestrol from 5 mg. daily at the seventh week of pregnancy to 125 mg. at the thirty-fifth week. Unfortunately, abortions often recur until the uterus develops sufficiently to accommodate a viable pregnancy.

QUESTION: What treatment is recommended for a 17-year-old boy whose roentgenograms reveal small defects on the superior and inferior margins of the anterior aspects of the vertebral bodies, the fifth to ninth thoracic? He was asymptomatic until a recent football injury caused by hyperextension of the spine. However, roentgenograms do not reveal evidence of fracture or dislocation. The process has been described as suggestive of Scheuermann's disease or aseptic necrosis of the vertebral bodies.

M.D., South Dakota

ANSWER: *By Consultant in Orthopedics.* The etiology of Scheuermann's disease is unknown and no treatment exists for the bony condition. Kyphosis develops in some cases because of wedging of the vertebrae. If such a tendency is apparent, the patient should be fitted with a high spinal brace with shoulder straps to hold the upper spine in extension.



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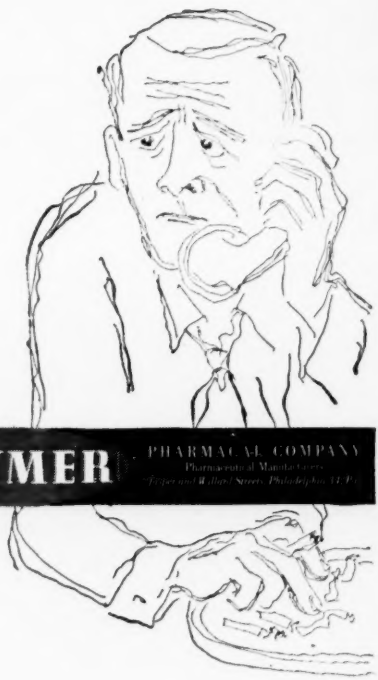

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1. Krantz, J.C. & Carr, C.J.: Pharmacological Principles of Medical Practice, Williams & Wilkins Co., Baltimore, Md., 1951.

2. Goodman, L. & Gilman, A.: The Pharmacological Basis of Therapeutics. The Macmillan Co., New York City, 1941.

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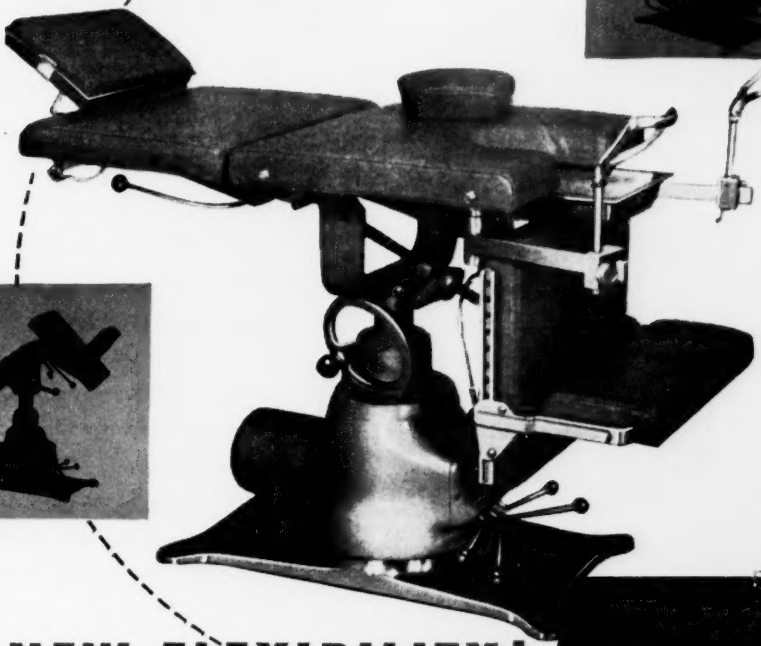

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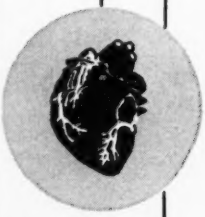

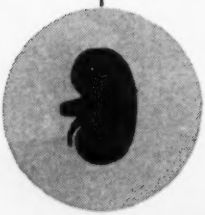

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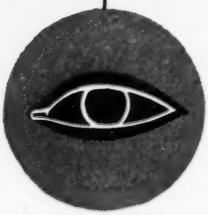

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1. Waters, E. G., and Wager, H. P.: Amer. J. Obstet. & Gyn. 60:885, 1950.

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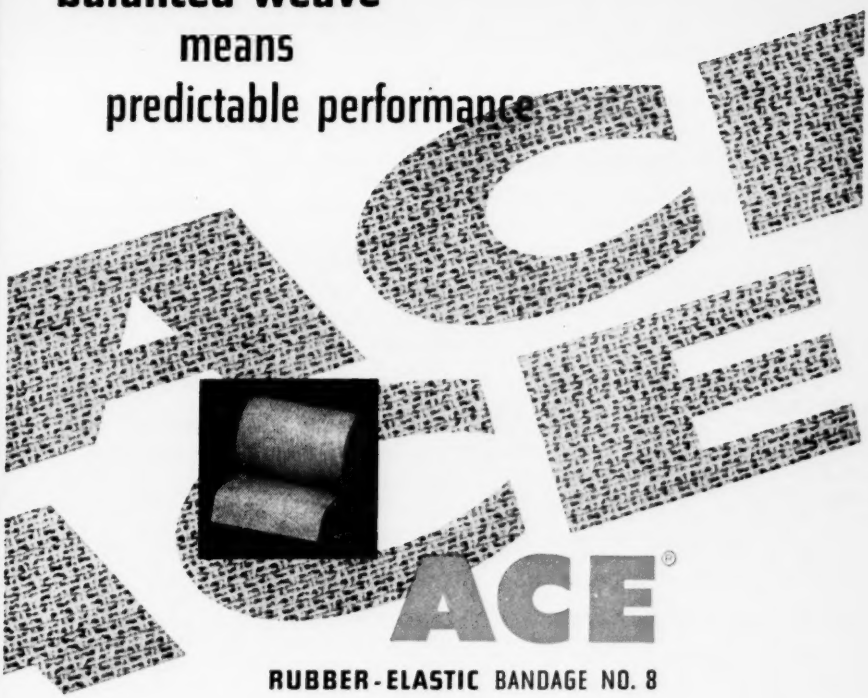

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Forensic Medicine

ARTHUR L. H. STREET, LL.B.

Prepared especially for Modern Medicine

PROBLEM: A doctor sent an accident patient to a radiologist. When the doctor testified on behalf of the patient in a suit for damages growing out of the accident, did the trial judge properly permit the doctor to testify as to what the roentgenograms showed and exclude his testimony concerning the radiologist's report?

COURT'S ANSWER: Yes.

The Kansas City Court of Appeals noted that no question was raised against the doctor's competency to interpret the pictures (248 S. W. 2d 870).

PROBLEM: In a suit involving the question of whether doctors had used due care and skill in operating on a man's foot, did the trial judge properly refuse to permit a specialist in internal medicine to testify whether proper care and skill had been employed? The internist had no knowledge of orthopedics except what he had gleaned in reading and had been told by experts in that line.

COURT'S ANSWER: Yes.

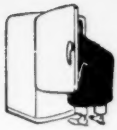
The California District Court of Appeal, First District, said that such testimony would be "no more persuasive than that of a layman who had read and heard what was the proper professional practice" (248 Pac. 2d 506).

The court quoted from a decision of the California Supreme Court dealing with the qualifications of medical experts in which it was declared that, although the witness "must have had basic educational and professional training as a general foundation for his testimony," the controlling consideration is the witness' "practical knowledge of what is usually and customarily done by physicians under circumstances similar to those which confronted the defendant charged with malpractice" (234 Pac. 2d 34).

PROBLEM: A statute provided for the appointment of an executive secretary by local boards of health. Could the secretary of a town board, a physician, validly contract with the board to treat smallpox patients at the expense of the board, apart from his salary as secretary?

COURT'S ANSWER: No.

The Appellate Court of Indiana said that the contract was against public policy as bringing the secretary's official duties in conflict with his personal interest. As an officer he was called upon to determine the patient's need for treatment and as a doctor there was an incentive to prolong his services. It was immaterial whether he acted conscientiously or not; invalidity of the contract rested upon a possibility that self-interest might dominate him (110 N. E. 1001).

"Obesity is a  nutritional problem"[1]

"The obese patient may be malnourished, even though he is not quantitatively undernourished."[2]

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1. Youmans, J. B.: Deficiency Diseases, M.D., VI:523, (December) 1951, p. 533.
2. Boyd, J. D.: Is This Patient Well Nourished and Well Developed?, The Interne, (August) 1947, p. 360.

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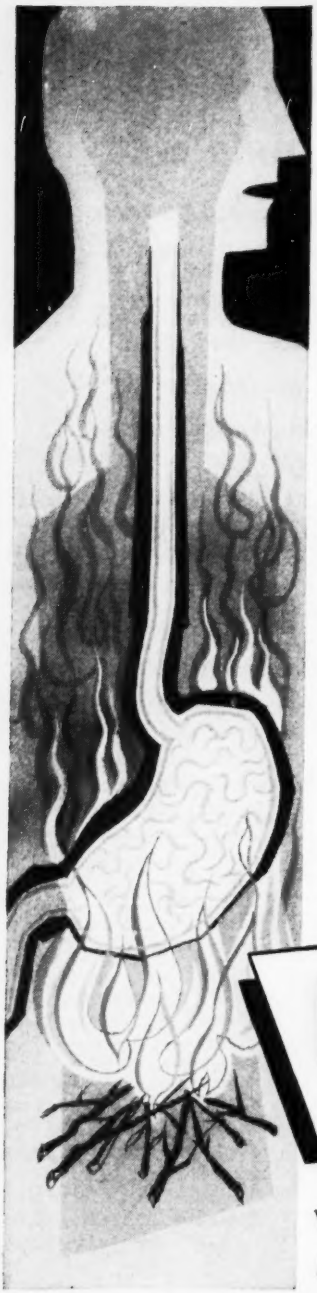

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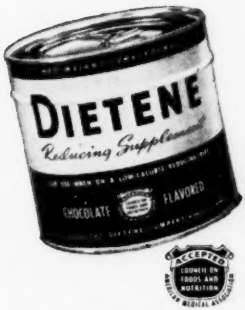

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PROBLEM: Plaintiff sued defendant for injury to his eye as the result of assault. Evidence showed that the plaintiff's doctor, not an ophthalmologist, noted developing opacity of the cornea, indicating the beginning of a traumatic cataract. The doctor did not advise an operation. Was the defendant entitled to diminution in the award of damages because a medical expert had testified on his behalf that the "prospects" were that an operation would remedy the condition and that 98% of such operations were successful in competent hands and under ideal conditions?

COURT'S ANSWER: No.

The Rhode Island Supreme Court decided: One injured by another is bound to use due care to effect a cure of his wounds to reduce the amount of recoverable damages. As decided by the appellate courts of Alabama, Ohio, and Maine, the plaintiff discharges this duty if he consults a competent doctor and follows the prescribed treatment (50 So. 1021; 41 Ohio St. 378; 51 Me. 439). But, as declared by the Minnesota Supreme Court, the extent to which one must submit to an operation is so peculiarly personal that a court or jury cannot determine the question for an individual unless the evidence shows that such operation as an ordinarily prudent person would permit would probably cure or improve the condition (144 N. W. 149).

The Rhode Island court decided that under certain circumstances one cannot collect damages for the loss of eyesight that could be avoided by an operation. However, in this case, the plaintiff's doctor had not advised an operation and plaintiff was not bound to follow the advice of the defendant's sur-

(Continued on page 56)

selective control

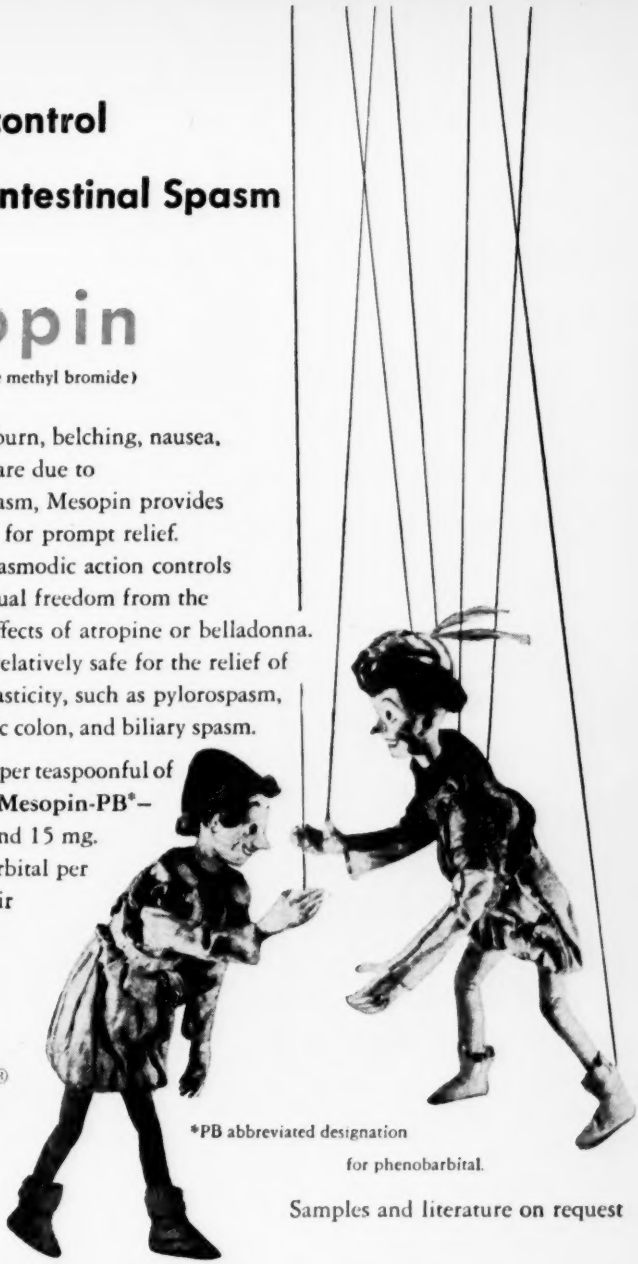
of Gastrointestinal Spasm

Mesopin

(brand of homatropine methyl bromide)

When pain, heartburn, belching, nausea, or unstable colon are due to gastrointestinal spasm, Mesopin provides an effective means for prompt relief. Its selective antispasmodic action controls spasticity with virtual freedom from the undesirable side effects of atropine or belladonna. Thus, Mesopin is relatively safe for the relief of gastrointestinal spasticity, such as pylorospasm, cardiospasm, spastic colon, and biliary spasm.

Mesopin—2.5 mg. per teaspoonful of elixir or per tablet. **Mesopin-PB***—2.5 mg. Mesopin and 15 mg. (1/4 gr.) phenobarbital per teaspoonful of elixir or per tablet.



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*PB abbreviated designation for phenobarbital.

Samples and literature on request

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He's heard the

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HOMOGENIZED MIXTURE OF VITAMINS A, D, B_1, B_2, B_{12}, C AND NICOTINAMIDE, ABBOTT

POUR out a shimmering spoonful of VI-DAYLIN . . . notice its unclouded yellow-honey appearance . . . sniff its pleasant, citrus-like odor . . . then *taste* it! That delicious lemon-candy flavor explains why children accept VI-DAYLIN eagerly right from the spoon—and willingly come back for more.

NOW CONTAINS 3 TIMES THE B_{12}

But take a look at VI-DAYLIN's improved formula. Here truly, is effective multivitamin therapy. Seven important vitamins in every spoonful—and now three times as much vitamin B_{12}. One 5-cc. teaspoonful daily is the average dose for children up to the age of 12. Mixes with milk, juices and soft foods for infants. Stable without refrigeration. VI-DAYLIN is available at all pharmacies in 90-cc., 8-fluidounce and 1-pint bottles. Abbott

IMPROVED FORMULA

Each 5-cc. teaspoonful of VI-DAYLIN contains:

Vitamin A	3000 U.S.P. units
Vitamin D	800 U.S.P. units
Thiamine Hydrochloride	1.5 mg.
Riboflavin	1.2 mg.
Ascorbic Acid	40 mg.
Vitamin B_{12} Activity (by microbiological assay)	3 mcg.
Nicotinamide	10 mg.

geon. He had not refused to submit to an operation and properly might have refused because there was no proof that betterment would result (138 Atl. 45).

PROBLEM: Does a roentgenogram, as evidence in a court trial, stand on a different footing from ordinary photographs?

COURT'S ANSWER: Yes.

The North Carolina Supreme Court ruled out a doctor's testimony that a roentgenogram of a skull disclosed "no objective evidence of bony disorder," because the picture had not been proved to be that of the plaintiff's skull, as had been assumed by the doctor. In so doing, the court quoted from a legal treatise (32 C. J. S., Evidence, sec. 712) a statement that roentgenograms cannot be authenticated in court in the same manner that ordinary photographs can be—by testimony that the photograph accurately represents the object it purports to picture. A roentgenogram simply shows shadows of objects not otherwise visible. To authenticate such a picture, there must be proof that the picture is of the object or part of the body it is claimed to be. There must also be evidence "that the picture is accurate, in the sense that it conforms to the standard of accuracy of X-ray pictures generally" (59 S. E. 2d 844).

PROPER PROCTOLOGICAL POSITIONING WITH

FINGER-TIP GEAR CONTROLS

Shampaine GARFIELD PROCTOSCOPIC TABLE

FOR MINOR TREATMENT TO MAJOR SURGERY

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PATIENT COMFORT . . . Heavy foam latex pad covered with beautiful stain resistant fabric.

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Please send me complete information on Shampaine Garfield Proctoscopic Table

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PROBLEM: Could a court base a decree of divorce for adultery on testimony of a blood grouping specialist that tests showed that both spouses belonged to blood group A, while the tests showed that the wife's child belonged to group B?

COURT'S ANSWER: Yes.

The New York Supreme Court for Kings County, Special Term, declared that the legal presumption of legitimacy of a child born in wedlock is to be overcome only by convincing evidence. But if, as in this case, blood grouping tests are scientifically conducted by doctors expert in the field, the results are conclusive, when definite exclusion is established (109 N. Y. Supp. 2d 276).

PROBLEM: Could a patient defend suit on a bill for services on the ground that the doctor treated him for a disease which he did not have, without proving that the doctor failed to use proper care and skill in diagnosing the disease?

COURT'S ANSWER: No.

The leading decision on this subject appears to be that rendered by the New Jersey Court of Errors and Appeals in 1887. The court summed up the full measure of a doctor's duty to his patients, except when he has guaranteed results: He "engages that he will use due care to discover the nature of the disease which gives occasion for his services, and in applying the usual remedies" (10 Atl. 358).

for oral infections

CILLORETS

antibiotic candy

Packed inside each tartly-flavored CILLORET are two antibiotics which together destroy or inhibit practically all the common pathogens which infect the buccal tissues.

CILLORETS are hard-candy troches in assorted lemon, cherry, and lime flavors which completely mask antibiotic taste. Each troche contains 20,000 units of Penicillin G Potassium and 50 units of Bacitracin to assure

More potent local antibiotic action

Penicillin and Bacitracin are truly synergistic[1]

A broader antibacterial spectrum

Organisms with only "borderline" sensitivity to penicillin or bacitracin singly are often readily susceptible to the combination[2]

Sustained saliva levels

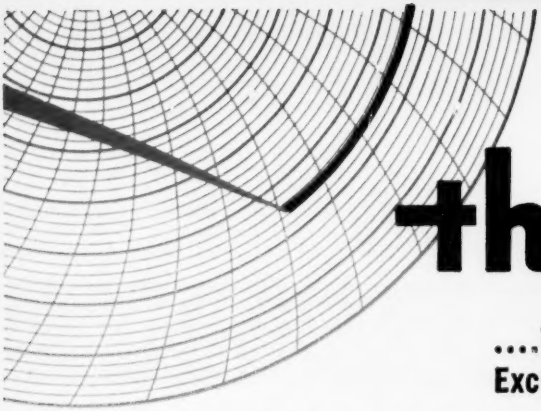
CILLORETS dissolve slowly because of their special hard-candy base. Dosage is only one troche q. 2 hr.

CILLORETS Penicillin-bacitracin hard-candy troches

In assorted lemon, cherry, and lime flavors. Packages of 10 and 20.

Bristol

1. PROC. SOC. EXP. BIOL. & MED. 68:419, 1948.
2. J. CLIN. INVEST. 28:864, 1949.



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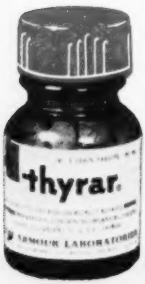
ISOTHERMIC PROCESSING

An Outstanding Achievement in Glandular Product Control

WHAT IT IS: **thyrar**—the entirely new, bovine thyroid preparation—is the culmination of decades of experience in glandular product control, with "isothermic processing" as the key to superior product uniformity. Positive isothermic control at every step in manufacture and exclusive use of bovine thyroid glands "quick-frozen" at the time of removal from the animal, provide a new, whole-gland preparation of highest purity. Distinct clinical advantages in all conditions requiring the metabolic action of thyroid are obtained with **thyrar.**



ADVANTAGES: **Complete efficacy of the whole gland • Greater uniformity of finished product • Elimination of unwanted organic matter • Double standardization—chemically assayed and biologically tested • Standardized equivalent to Thyroid U.S.P.—no dosage change required • Tasteless • New, small-sized, whole-thyroid tablet offers greater patient convenience.**

HOW SUPPLIED: **Tablets of ½, 1 and 2 grains in bottles of 100 and 1000.**

world-wide dependability

a *new* experience in *tranquillity*

for anxious, tense, restless patients

Seconesin

safe relaxant-sedative

Seconesin introduces a totally new idea in sedation... a safe, non-narcotic, rapid method to bring "a classical state of relaxation," a feeling of being pleasantly and comfortably at ease in tense, restless, anxious, wound-up patients.

each lime-colored, scored tablet combines:

MEPHENESIN 400 mg.
modern relaxant of choice • Council Accepted
and
SECOBARBITAL 30 mg.
tried and true sedative • Council Accepted

Seconesin is safer because its euphoric influence is attained with a minimum of secobarbital... and because both its components are rapidly dissipated and eliminated. No fear of cumulation or "hangover."

Daytime relaxation with **Seconesin** is so calming that most patients ***sleep well at night*** without hypnotics.

Average dose: 1 Seconesin tablet every 4 hours; 1 or 2 on retiring but this is usually not necessary. Supplied on your Rx in bottles of 50, 100 and 500 tablets.

samples (perhaps for personal trial) and literature on request.

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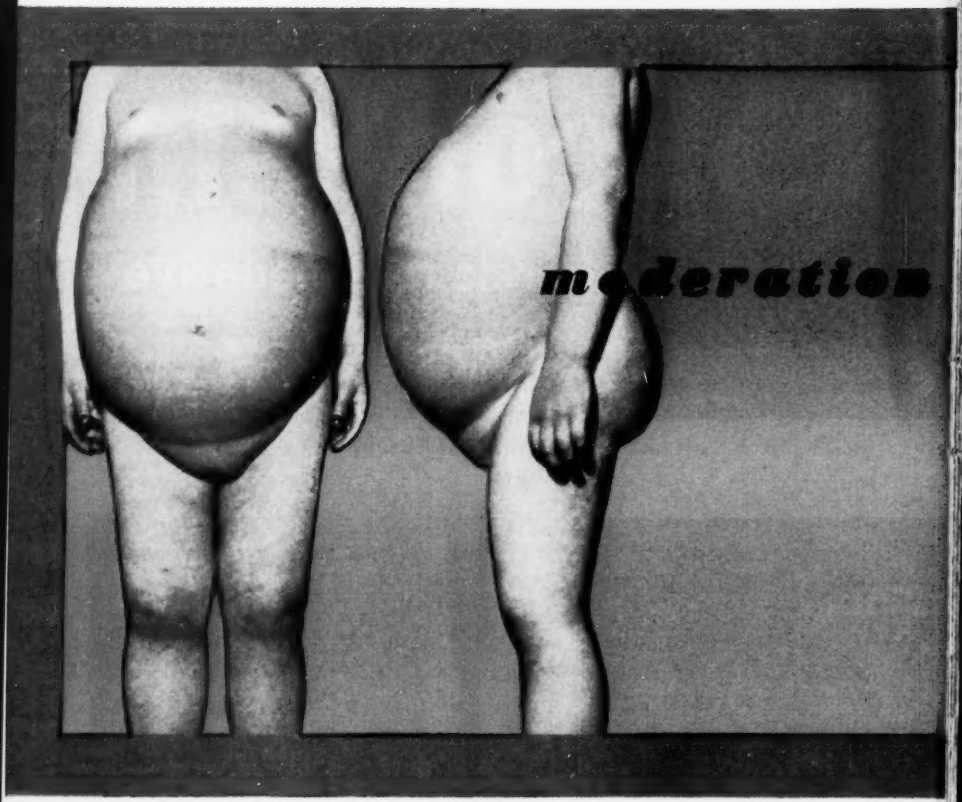
Therapeutic Preparations for the Medical Profession


moderation

in the blended diuretic regimen

In the long-term regimen, Calpurate meets the clinical need for moderate diuretic action, sustained effectiveness, and minimal toxicity. Calpurate also promotes increased cardiac output.

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Calpurate is the chemical compound, theobromine calcium gluconate . . . unusually free from gastrointestinal and other side effects . . . does not contain the sodium ion.

to 'lighten the load' in congestive heart failure

Calpurate is particularly indicated:
when edema is mild and renal function adequate . . .
during rest periods from digitalis and mercurials . . .
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Calpurate®

the moderate, non-toxic diuretic

SUPPLIED: Calpurate Tablets of 500 mg. (7½ gr.)
Calpurate Powder
Calpurate with Phenobarbital Tablets—16 mg. (¼ gr.) phenobarbital per tablet

Washington LETTER

Personnel Changes in FSA Will Be Slow Operation

WHEN and if the new administration attempts to place its friends in key jobs in the government's health programs, the process may be a painful one for the old employees but it will also be a slow and complicated operation for the administration.

Over the years, the Federal Security Administration has built up civil service coverage of jobs to one of the highest levels of any federal department or agency. For example, John L. Thurston was assistant administrator under FSA Administrator Oscar Ewing. In Mr. Ewing's absence from the city, Mr. Thurston was acting administrator. In almost any other agency, such a position would be considered strictly appointive and the incumbent automatically would go out with his chief. In FSA, however, the assistant administrator is a civil service employee.

"I feel I should warn you, sir. In this business the customer isn't necessarily always right."

The fact that Mr. Thurston, at this writing, has indicated that he won't stay on or make a fight for the job is beside the point. He could stand on his civil service rights if he wanted to.

In fact, the only strictly appointive, noncompetitive or "patronage" jobs at the top of Federal Security Agency number only four, in addition to the administrator. They are two assistants to the administrator and two confidential assistants. Incidentally, the confidential aides posts were not occupied throughout the last several months.

Down in the lower level of Federal Security Agency, as well as through the departments operating under FSA (Public Health Service, Food and Drug Agency, and Children's Bureau), the situation was found to be the same. Almost without exception the important, the key jobs, are under civil service. In addition, the commissioned officers of Public Health Service, which takes in all the physicians in that service, have a special job tenure and retirement protection written

No "Belladonna BACKFIRE"

with this prompt, positive relief of FUNCTIONAL G.I. SPASM

More and more published clinical studies continue to prove that BENTYL provides effective relief from pain, cramps and general discomfort due to functional G. I. spasm . . . without "belladonna backfire."

Trade-mark "Bentyl" Hydrochloride

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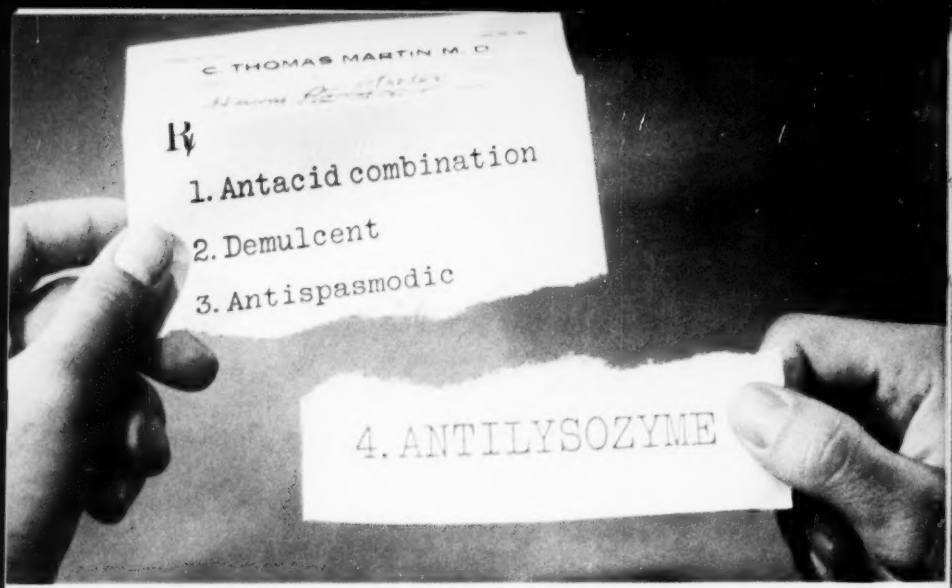
SAFE, DOUBLE-SPASMOLYSIS

Each capsule or teaspoonful syrup contains
BENTYL . . . . . 10 mg.
when sedation is desired
BENTYL . . . . . 10 mg.
WITH PHENOBARBITAL . . . . . 15 mg.

DOSAGE: *Adults*—2 capsules or 2 teaspoonfuls syrup 3 times daily, before or after meals. If necessary repeat dose at bedtime.
In Infant Colic—½ to 1 teaspoonful syrup 3 times daily before feeding.



Isn't this too often the missing fourth
in peptic ulcer therapy?

KOLANTYL INCLUDES THE IMPORTANT 4th FACTOR

1. **A SUPERIOR ANTACID COMBINATION** (magnesium oxide and aluminum hydroxide, also a specific antipeptic).
2. **A SUPERIOR DEMULCENT** (methylcellulose, a synthetic mucin).
3. **A SUPERIOR ANTISPASMODIC** (BENTYL Hydrochloride) which provides direct smooth muscle and parasympathetic depressant qualities without "belladonna backfire."
4. **INACTIVATION OF LYSOZYME**—Laboratory research and clinical studies[1,2] indicate that lysozyme plays an important role as one of the etiologic agents of peptic ulcer. By inhibiting or inactivating lysozyme with sodium lauryl sulfate, KOLANTYL includes the important 4th factor toward more complete control of peptic ulcer.

KOLANTYL

DOSAGE: 2 Kolantyl tablets or 2 to 4 teaspoonfuls of Kolantyl Gel every 3 hours as needed for relief.

1. Hufford, A. R., Rev. of Gastroenterology, 18:588, 1951
2. Miller. B. N., J. So. Carolina M. A., 48:1, 1952

into the law and are not subject in any way to political or patronage manipulations.

Mrs. Oveta Culp Hobby and those helping her to give FSA a new political tone—or to remove an objectionable tone—are learning that they can effect some changes, but not too many.

Contrary to the opinion that prevails outside Washington, civil service does not give anyone an iron-fast grip on a job, particularly if it's on the policy-making level. The new administrator, in FSA or any other department, is guaranteed enough freedom with personnel so that the department will reflect his or her policies.

If an employee can be shown to be incompetent in the job, he can be moved out swiftly, politics or no politics, civil service or no civil service. Some employees will be dislodged this way, but not in sufficient numbers to make significant difference.

A second possibility is a "conference." The administrator or her representative would sit down with the employee in question and in a simple and polite way ask him or her to step aside, pointing out that everyone will be happier with a change. Depending on personalities, this might work. In this case the individual, probably with the help of the department's personnel officer, would search around for another job of approximately the same status and pay.

If the employee has long tenure in the job, and is jealous of his public position, he may tell the administrator he isn't going to move. Under the law, he can be moved out but the administrator must then place that employee in a job that [a] pays the same, [b] is comparable from a professional standpoint with the one vacated, and [c] is in the same city. If too many situations are handled this way, the FSA building will be crowded with people with nothing to do.

In addition to this protection for civil service people, the Public Health Service operates under a semiautonomous charter. The Surgeon General is appointed by the President of the United States, not the Federal Security Administrator. The records reveal no situation in which a Surgeon General was removed from the job without his consent.

Furthermore, it is not clear just what authority the FSA administrator would have to make personnel changes in Public Health Service if the Surgeon General didn't approve.

At the end of six months, it is true that there will be many new faces in Federal Security Agency. But it is also true that the people

"Couldn't I give a pound of flesh, instead?"

they displace will, to a large extent, be looking out on the world and its problems from behind other desks of about the same size. Nor will there be any interruption in the quality and quantity of their paydays.

Reorganization

The reorganization of Veterans Administration's medical department, announced when the management survey of the agency was made public, will affect few doctors in the program. It is an administrative reshuffling, rather than a basic reorganization.

Top officials in the VA medical department insist that a cleaner, smoother, and more responsive operation will result, because doctors, represented by the Chief Medical Director, will be in charge of more activities. Critics of VA say that all of this may be true, but they are inclined to wait and see what happens before agreeing completely that the improvements are substantial.

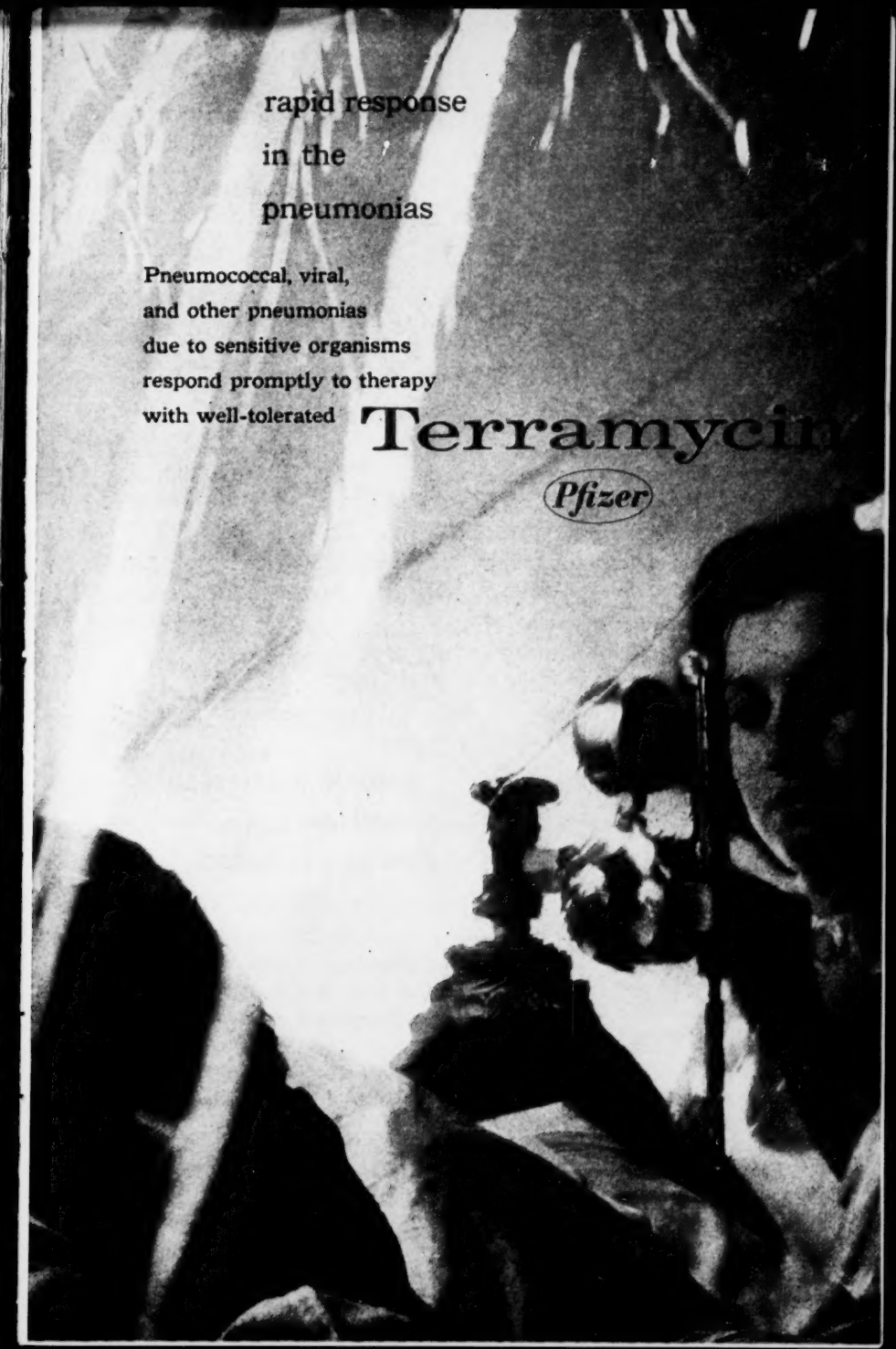
At the highest level, the Chief Medical Director, Vice Adm. Joel T. Boone, will benefit by being included in a top echelon of only three officials who report directly to the VA Administrator. Under Adm. Boone, the chief changes will be:

1] Dividing responsibilities into planning and operations

2] Giving the medical department more control over its own budget

3] Giving the medical department complete control over purchase and handling of its own supplies and the responsibility for all maintenance.

(Continued on page 70)


rapid response
in the
pneumonias
Pneumococcal, viral,
and other pneumonias
due to sensitive organisms
respond promptly to therapy
with well-tolerated
Terramycin
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Life's Weary Moments

"The croton oil was for you, not your car!"

Think of a gag that fits the illustration. For every issue a new gag is published and the author sent $5. The Feb. 1 winner is

W. H. Johnson, M.D.
Spatsylvania, Va.

Mail your caption to The Cartoon Editor Caption Contest No. 1
MODERN MEDICINE
84 South 10th St.
Minneapolis 3, Minn.

The Veterans Administration flatly refused to carry out one major recommendation of the management experts that the medical department be decentralized into 20 medical centers, with the manager of each responsible for all medical activities within a specified geographic area.

Instead VA will continue with the system it has been using for years, which centralizes control of the medical department in Washington and has no clearly defined lines of authority in the field. The Chief Medical Director will continue to be charged with responsibility for everything pertaining to medical care anywhere in the country. In the field he will be represented, as in the past, by 6 area medical directors. These men are in no sense managers; they may only follow through with policy laid down in Washington.

Washington Notes

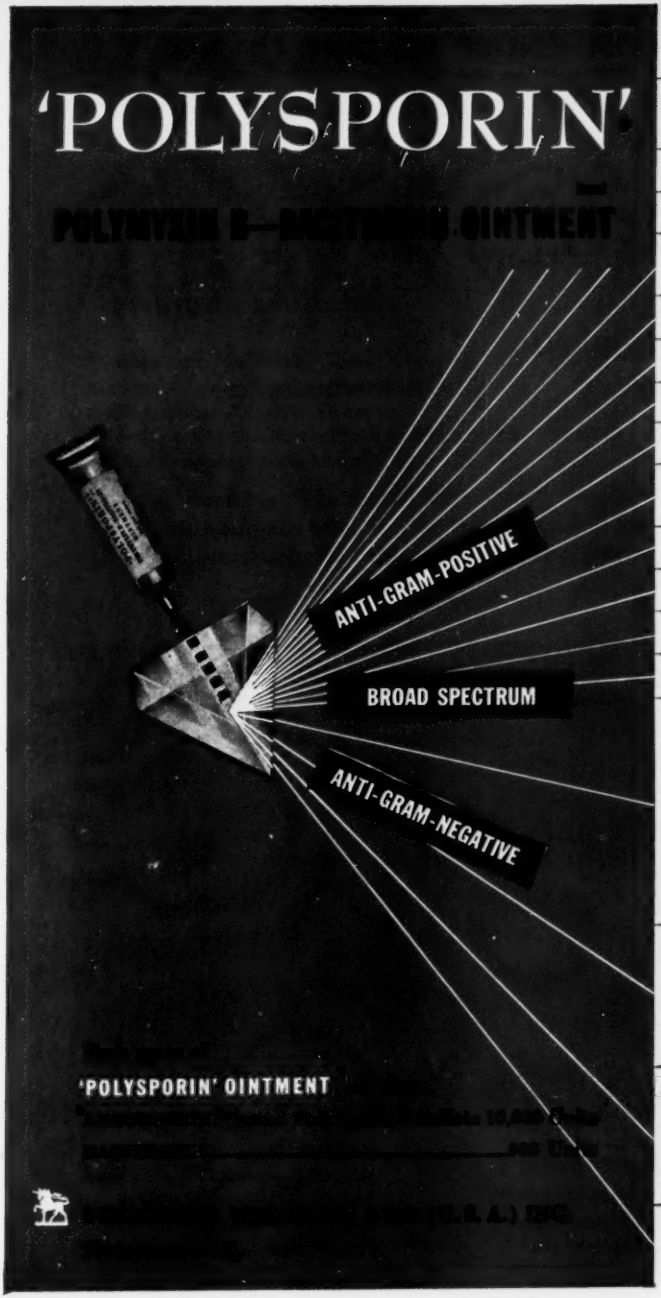
Question of where the limited supply of gamma globulin is to be used will continue as a hot issue throughout next summer's poliomyelitis season. Regardless of production increases, the available supply will not be sufficient to treat all children whose parents become worried about poliomyelitis epidemics. Medical planners would like to conserve gamma globulin for use in areas where epidemics actually occur.

Veterans Administration and the American Legion won an encouraging, although possibly temporary, victory at the American Medical Association meeting at Denver. The AMA House of Delegates decided not to demand that VA stop treating non-service connected cases when the patient can afford to pay. Instead, VA and private physicians were asked to be more realistic in classifying applicants as not being able to "afford" hospital treatment.

New manual issued by Federal Civil Defense Administration outlines specifically the ways in which FCDA will help states to purchase medical supplies for emergency stockpiles. The manual *Federal Contributions* can be obtained for $1 from the Government Printing Office, Washington 25, D.C.

Time will tell whether Sen. Taft's suggestion for a commission to study federal health and social security programs will be of any significance. The Senator still hopes to delay legislation in these fields this year while the commission makes a long-range study.

"You look pale today, Mr. Adams."



INDICATIONS

- infected wounds resulting from trauma or surgery
- infected burns
- infected skin grafts
- abscesses and ulcers in any accessible location
- furuncles
- pyoderma
- ecthyma
- folliculitis
- infectious eczematoid dermatitis
- impetigo
- acne
- styes
- external ear infections
- eye infections such as:
  - conjunctivitis
  - blepharoconjunctivitis
  - scleritis
  - keratitis
  - dacryocystitis, etc.

SECONDARY INFECTIONS

superimposed on any dermatological condition

AVAILABLE IN

tubes of 15 Gm. with applicator tip

tubes of ⅛ oz. with ophthalmic tip

complete information will be sent on request

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(brand of phenylbutazone)

for

ARTHRITIS

and allied disorders

new... synthetic...

non-hormonal...

orally effective

The remarkable clinical effectiveness of BUTAZOLIDIN in producing striking relief of pain, coupled with functional improvement, is the subject of recent authoritative reports.

Journal of the American Medical Association* 149:*729 (June 21) 1952.

Kuzell, W. C., and others: Phenylbutazone (Butazolidin®) in Rheumatoid Arthritis and Gout.

Gout: "... 25 of the 48 gouty patients experienced a complete remission in 48 hours or less."

Journal of the American Medical Association* 150:*1087 (Nov. 15) 1952.

Steinbrocker, O., and others: Phenylbutazone Therapy of Arthritis and Other Painful Musculoskeletal Disorders.

Osteoarthritis: In 63 per cent "... there was improvement of functional capacity ranging from slight to complete, with striking enhancement of coordinated movements. ..."

Journal of the American Medical Association* 150:*1084 (Nov. 15) 1952.

Stephens, C. A. L., Jr., and others: Benefits and Toxicity of Phenylbutazone (Butazolidin®) in Rheumatoid Arthritis.

Spondylitis: "Of the 32 patients ... 25 patients (80%) showed 3 to 4 plus subjective improvement."

Bulletin on Rheumatic Diseases* 3:*23, 1952.

Kuzell, W. C.: Phenylbutazone (Butazolidin®).

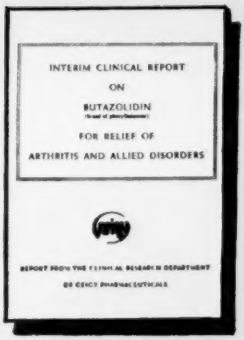
Rheumatoid arthritis: "Its use is followed by substantial relief of symptoms in about 80 per cent of patients with rheumatoid arthritis."

from the clinical research
department of Geigy Pharmaceuticals

AN INTERIM REPORT on

BUTAZOLIDIN

First of a series, the Interim Clinical Report on BUTAZOLIDIN summarizes and analyzes the literature on this important new agent. Mailed recently to the medical profession, additional copies are available on request.



BUTAZOLIDIN is a totally new and outstandingly effective agent in the therapy of virtually all forms of arthritis. In most indications it produces relief of pain in approximately 75 per cent of cases and measurable functional improvement in 50 per cent.

In relation to its high degree of effectiveness BUTAZOLIDIN is of relatively low toxicity. However, to obtain optimal results with minimal risk of side reactions physicians are urged to read the mentioned reports in their entirety.

Physicians are also invited to write our Medical Department for the brochure, "Essential Clinical Data on BUTAZOLIDIN," *and other informative literature.*

BUTAZOLIDIN®, brand of phenylbutazone, is available as coated tablets of 100 mg. and 200 mg.

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has no seasonal bounds

STREPTOMAGMA produces prompt and complete remission in bacterial diarrheas. This modern anti-diarrhetic combines *Dihydrostreptomycin*, for its potent bacteriostatic action, particularly against diarrhea-causing coliform organisms; *Pectin*, for its demulcent and hydrophilic effect; *Kaolin*, for tremendous adsorptive power; and *Alumina Gel* . . . itself a potent adsorptive . . . soothing, protective suspending agent.

Supplied: Bottles of 3 fluidounces.
For a clinical sample, just write to Wyeth, Philadelphia 2, Pa.

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DIHYDROSTREPTOMYCIN SULFATE AND PECTIN
WITH KAOLIN IN ALUMINA GEL

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MODERN MEDICINE
THE JOURNAL OF DIAGNOSIS AND TREATMENT

Durham-Humphrey Law

a help or a nuisance?

A Modern Medicine Editorial

Many a doctor or druggist when he sees a new law coming up to regulate prescription writing groans and says, "The Lord deliver me from my friends."

Today I heard my druggist complain loud and long because he now has so much to write on every label. How bureaucrats love to make people write lines and lines of stuff that no one will ever read or refer to or use! My druggist was angry partly because he had to keep me waiting for ten minutes while he filled out many lines on the label of the bottle of medicine which I wanted to give quickly to a woman who had come in with severe pain. She too had to wait in order that bureaucrats could be made happy.

The druggist was also irked because one of my old patients who lives a few miles away, across the Indiana line, wanted him to mail her a box of the medicine she often uses and, according to the new regulations, he did not dare send it.

He was bitter because, as he said, all day long he had been behind on his work while trying to get doctors on the phone to OK refills of prescriptions. The doctors were annoyed and some had hung up on him; the patients were angry. All the fuss seemed to him to be to little if any purpose.

A person living in one of the suburbs of a big city does not want to take two or three hours off for a trip into town and back just to get a prescription refilled. We all should face this fact; in a village, of course, it is different.

When new laws come out, supposedly designed to protect the

public, I always think of the testimony of Sir James Purves Stewart, England's great neurologist, given before a legislative committee in London. There, some do-gooders were worried because every year a few half-crazy people had taken barbiturates with suicidal intent. A law was being planned to compel physicians and druggists to fill out extensive forms every time they gave a few tablets of phenobarbital to a patient.

Sir James said he was much against the idea because he was sure that the new law would waste endless time for many thousands of doctors. He doubted if it would keep any determined would-be suicide from doing away with himself.

As Dr. Robert L. Swain has remarked in *Drug Topics,* it now remains to be seen if the new Durham-Humphrey law will help anyone or if it will be just another nuisance to all. My hunch is that we were safe enough as we were. No law is likely ever to be as good a safeguard for patients as is the knowledge and good sense and conscience of the fine druggist who many times a day refills such prescriptions as he feels are probably safe and refuses to refill those which he thinks are likely to do harm. Also, when dealing with prescriptions written by the doctors with whom he has dealt for years, he knows their individual ways and usually can predict what they will answer when he calls them on the phone.

WALTER C. ALVAREZ

How Ascorbic Acid Works in the Body

It is always interesting to discover what a vitamin actually does in the body, what chemical process it facilitates or makes possible. A while ago the late Robert R. Sealock and Ruth L. Goodland reported that one of the functions of ascorbic acid, or vitamin C, is to serve as a coenzyme in the oxidation of the amino acid tyrosine. The vitamin is essential to the complete utilization of tyrosine in the body.

Tyrosine is not oxidized by slices of liver taken from scorbutic guinea pigs unless vitamin C is added; then the process works normally. Velocity of oxidation depends upon the concentration of ascorbic acid.—W.C.A.

Though progress seems favorable with acute myocardial infarction, cardiac rupture may occur.

Spontaneous Cardiac Rupture

STANFORD WESSLER, M.D., PAUL M. ZOLL, M.D., AND MONROE J. SCHLESINGER, M.D.

Yamins Research Laboratories, Beth Israel Hospital, and Harvard University, Boston

AN often little expected and perhaps largely avoidable complication of acute cardiac infarction is spontaneous rupture. Such a catastrophe accounts for one-tenth of all deaths from acute myocardial infarction and is most apt to occur during seemingly favorable progress.

Cases in which rupture develops, point out Stanford Wessler, M.D., Paul M. Zoll, M.D., and Monroe J. Schlesinger, M.D., are often regarded as mild. The patient usually appears to be doing well and not to need strict limitation of physical activities.

With just this type of uncomplicated involvement, in which the blood pressure does not fall and rest is not always enforced, is rupture likely to occur.

The rupture usually happens between the fourth and eleventh day of acute myocardial infarction. The patient usually has hypertension which persists during the period of infarction and has not had myocardial infarction or congestive failure before.

Some unusual effort, such as rapidly climbing several flights of stairs or taking strenuous diagnostic tests, has often been made by the patient within twenty-four hours of the rupture. The lack of severe symptoms encourages greater activity by the patient before rupture.

Unusual effort predisposing to cardiac rupture is encountered most rarely among persons at rest in hospitals, more frequently among coroners' cases, and is commonest of all among disturbed psychiatric patients.

No conclusive evidence has yet been produced that, with the possible exception of Pitressin, therapeutic drugs may abet the development of rupture.

Some conditions are found with equal frequency among patients with myocardial infarction whether or not rupture occurs. These include angina pectoris, fever, and leukocytosis. Age is not a discriminating factor.

Women cardiac patients are more apt to have rupture than are men with heart disease, apparently because of the higher incidence of hypertension among women, but the occurrence of rupture in the population as a whole is about equal between the sexes.

The pathogenesis of spontaneous cardiac rupture. Circulation 6:334-351, 1952.

The pathologic conditions common to all ruptured hearts are:

- Fresh coronary artery occlusion
- Recent myocardial infarct
- Transmural myocardial infarct
- A myocardial infarct with a poor blood supply
- An infarct without fibrosis in at least one area.

Rupture is usually through the ventricular wall. In such cases, diagnosis is rarely made during life because of the rapid exitus. When the tear is through the interventricular septum, diagnosis may be possible and the patient may live as long as five years.

To prevent spontaneous cardiac rupture, patients with symptoms or electrocardiographic evidence of acute infarction should limit activities strictly for at least twenty-one days. Since both unusual activity and hypertension seem necessary to produce rupture, such rest may be lifesaving. Rest and sedation will reduce cardiac work, lessen the extent of ischemic necrosis, and diminish intraventricular pressure.

Encephalomyocarditis: a Disease Entity

OTTO SAPHIR, M.D.

SIMULTANEOUSLY occurring inflammatory lesions of the brain and myocardium, not caused by poliomyelitis, may appear in human beings and are probably of viral origin. In reporting 3 such instances, all fatal, Otto Saphir, M.D., of Michael Reese Hospital, Chicago, observes that encephalomyocarditis is perhaps not an extremely rare entity, though no infectious agent has been isolated.

The lesions resemble those of encephalomyocarditis observed in apes and hamsters. This disease is usually ascribed to a virus whose different strains may constitute the viruses of encephalomyocarditis, the meningoencephalitis virus, and the Columbia SK and MM viruses.

Onset is usually sudden, with an anxiety state, reflex disorders with or without involvement of cranial nerves, and simultaneous subjective heart troubles and circulatory insufficiency. First symptoms are usually headache, fever, and convulsions, then stupor.

The encephalitis may be severe, with concurrent electrocardiographic changes indicating myocardial damage. Involvement of either brain or myocardium, however, may not be recognized until convulsions and coma appear, followed by unexpected death. Brain and heart involvement is found in postmortem examinations.

When such a disease complex appears, the serum should be examined for neutralizing antibodies.

Encephalomyocarditis. Circulation 6:843-850, 1952.

Diagnosis of congenital heart disease is facilitated by correlation of clinical and physiologic findings.

Types of Congenital Heart Disease

R. J. BING, M.D., L. M. BARGERON, M.D., MAX TAESCHLER, M.D., AND S. TULUY, M.D.
University of Alabama, Birmingham

THOMAS A. LOMBARDO, M.D.
Peter Bent Brigham Hospital, Boston

CONGENITAL heart disease may be classified as cyanotic or noncyanotic.

Except for the possibility of arterial oxygen unsaturation caused by pulmonary disease, the cyanosis in congenital heart disease usually results from an intracardiac venoarterial shunt—right-to-left. A patient with congenital heart disease who is not cyanotic usually does not have this right-to-left shunt.

R. J. Bing, M.D., Thomas A. Lombardo, M.D., L. M. Bargeron, M.D., Max Taeschler, M.D., and S. Tuluy, M.D., consider roentgenographic examination the most important part of the examination in congenital heart disease, but emphasize the value of the inclusion of physiologic and electrocardiographic findings in a selective plan of diagnosis.

TABLE 1. HEMODYNAMIC PATTERNS

PATTERN	OCCURRENCE IN CONGENITAL HEART DISEASE	
	Cyanotic patients	Noncyanotic patients
Pulmonary flow less than systemic; pulmonary artery pressure usually decreased	Yes	No
Pulmonary flow greater than systemic; pulmonary artery pressure normal or increased	Yes	Yes
Pulmonary flow equal to systemic at rest and after exercise	No	Yes

The significant hemodynamic patterns in cyanotic and noncyanotic congenital heart disease are shown in Table 1.

Physiologic, fluoroscopic, and electrocardiographic findings are correlated in Table 2 for cyanotic patients and in Table 3 for noncyanotic patients.

Congenital heart disease: a clinical and physiologic correlation. Ann. Int. Med. 37:664-676, 1952.

TABLE 2. CORRELATED FINDINGS IN CYANOTIC PATIENTS

Pulmonary flow less than systemic; pulmonary artery pressure usually decreased

DIAGNOSIS	FLUOROSCOPIC FINDINGS				ELECTRICAL PREPONDERANCE
	Lung fields	Size and shape of heart	Pulmonary window	Pulmonary segment	
Tetralogy of Fallot	Clear	Elevated apex not enlarged, boot-shaped	Clear	Concave	Right
Pseudotruncus	Clear	Enlarged and boot-shaped	Clear	Concave	Right
Tricuspid atresia	Clear	Concavity of lower right border in P.A. projection, boot-shaped	Clear	Concave	Right
Transposition of the great vessels with pulmonary stenosis	Clear	Enlarged, narrow mediastinal shadow in A.P. and lateral positions	Hazy	Concave	Combined heart strain
Ebstein's disease with a patent foramen ovale	Clear	Enlarged	Hazy	Convex	Right or left with bundle-branch block
Pulmonary arteriovenous fistula	Round opacities	Enlarged or normal	Hazy	Convex	Left
Patent foramen ovale or auricular septal defect with pulmonary stenosis	Clear	Slightly enlarged	Hazy	Convex	Right

Pulmonary flow greater than systemic flow and/or pulmonary artery pressure normal or increased

Eisenmenger's complex	Vascular	Enlarged	Hazy	Convex	Right
Complete transposition	Vascular	Enlarged and narrow mediastinal shadow in A.P., widening in lateral view, no aortic knob	Hazy		Right
Patent ductus arteriosus with a reversed flow	Vascular	Enlarged	Hazy	Convex	Right
Truncus arteriosus	Vascular	Enlarged and boot-shaped	Clear	Concave	Left or right

TABLE 3. CORRELATED FINDINGS IN NONCYANOTIC PATIENTS

DIAGNOSIS	FLUOROSCOPIC FINDINGS				ELECTRICAL PREPONDERANCE
	Lung fields	Size and shape of heart	Pulmonary window	Pulmonary segment	
Pulmonary flow greater than systemic flow and/or pulmonary artery pressure normal or increased					
Isolated septal defect, auricular					
Uncomplicated	Vascular	Enlarged	Hazy	Convex	Right
Lutembacher's	Vascular	Enlarged	Hazy	Very prominent	Right
Ventricular septal defect	Vascular	Usually enlarged	Hazy	Convex	Left or right
Patent ductus arteriosus	Vascular	Enlarged	Hazy	Convex	Normal or left
Aortic septal defect	Vascular	Enlarged	Hazy		Normal or left
Anomalous venous return with pulmonary vein emptying into vena cava or right auricle	Vascular	Enlarged	Hazy	Convex	Right
Pulmonary flow equals systemic at rest and after exercise					
Pure pulmonic stenosis	Clear	Enlarged	Hazy	Prominent	Right

¶ **PITUITARY IRRADIATION** may completely inactivate acromegaly and obviate surgical removal of the eosinophilic adenoma. Svend G. Johnsen, M.D., of the University Hospital, Copenhagen, finds bony overgrowth and enlargement of soft tissues stopped in 16 of 21 cases observed for periods as long as twenty years. Increase in size of the pituitary fossa occurred in only 1 instance after administration of from 6,000 to 9,000 r. Headache persists in some cases because of irreversible changes in the growth of the skull. The continuing hypermetabolism, of unknown pathogenesis, is unrelated to thyrotoxicosis and does not react to thiouracil. The recommended procedure, with 180 kilovolts, 4 milliamperes, distance 40 cm., Thoraeus' filter or ½ mm. of copper, is irradiation of both temples and the forehead with 200 r daily for five days with an intensity of 18.5 r per minute, each field thus receiving 1,000 r. Three such series of 3,000 r each should be given. Visual disturbances may entirely disappear.

Acta med. Scandinav. 144:40-61, 1952.

Salt restriction is rational only if heart disease provokes renal mechanisms causing electrolyte and water retention.

When to Employ a Low-Salt Diet

MILTON W. ANDERSON, M.D.
Mayo Clinic, Rochester, Minn.

CONGESTIVE heart failure is an indication for restriction of dietary sodium, but cardiac patients who have never decompensated should be permitted normal salt intake.

Patients who have valvular heart disease, angina pectoris, or other forms of cardiac disease unassociated with abnormal retention of salt and water will fail to benefit from a low-salt diet. Indeed, the indiscriminate recommendation of a diet low in salt may be harmful nutritionally, psychologically, and economically. Further, such diets can actually be dangerous. Hypochloremic alkalosis may develop, especially if mercurial diuretics are also used.

Milton W. Anderson, M.D., has observed examples of needless restriction of salt in patients with many different organic and functional cardiac diseases (see table). The low-salt diet has no influence on the basic pathologic process. That is, sodium restriction is without prophylactic effect. Of course, when any of these forms of heart disease is associated with retention of salt and water as evidenced by ascites, pleural effusion, or edema, peripheral or pulmonary, salt intake should be restricted.

However, the degree of sodium restriction needed will vary among patients. Extreme restriction of sodium to 0.2 gm. per day is rarely necessary for congestive heart failure. In most instances, diets which provide 0.5 gm. sodium a day will be sufficiently effective. The difference in the palatability, choice of foods, and ease of preparing the 0.2-gm. and 0.5-gm. sodium diets is remarkable.

Further, once compensation is established, salt restriction may often be even less rigid. A diet

LOW-SODIUM DIET NOT INDICATED
Irritable heart syndrome
Extrasystolic arrhythmias
Paroxysmal tachycardias
Neurocirculatory asthenia
Valvular heart disease without congestive failure
Rheumatic type
Syphilitic type
Subacute bacterial endocarditis
Acute rheumatic fever without failure
Coronary atherosclerosis with angina pectoris and without myocardial failure
Acute myocardial infarction without congestive failure
Congenital cardiovascular anomalies without congestive failure
Cyanotic type
Acyanotic type

Abuses of low sodium content diet in cardiovascular disease. Minnesota Med. 35:633-638. 1952.

containing as much as 2 gm. of sodium is usually adequate to maintain compensation except for patients with little cardiac reserve. Home preparation of this diet is fairly easy. Some patients who decompensated because of a temporary aggravating factor such as acute rheumatic fever, infection, hyperthyroidism, or obesity may later maintain compensation with only slight salt restriction once the offending condition has been corrected. However, completely free use of salt is probably inadvisable for any patient who has once been decompensated.

Since the prime indication for salt restriction is abnormal retention of salt, and thereby water, a low-salt diet is applicable for cirrhosis, nephrosis, and some endocrine disorders.

Another therapeutic use of salt restriction is in the management of some patients with hypertension. Here any but drastic sodium restriction is probably valueless. The daily sodium intake must be restricted to 0.5 gm. or less and should be as low as 0.2 gm.

Some hypertensive patients will improve with a low-salt diet but the majority obtain little or no benefit. After a fair trial, with frequent testing of sodium excretion in the urine, the low-salt diet should be abandoned if clinical improvement is not seen.

Further, if renal function is impaired, as is often the case with severe hypertensive vascular disease, dietary restriction of salt may seriously derange electrolyte balance with attendant symptoms of salt depletion.

Failure of Aureomycin in Mumps

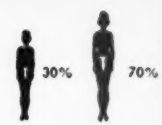
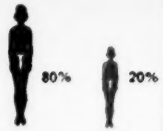
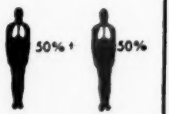
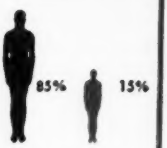
LE ROY HOMER, M.D., AND W. N. DONOVAN, M.D.

NO BENEFICIAL effects against mumps or the complications of the disease are afforded by aureomycin.

In a study by Lt. LeRoy Homer, M.C., and Lt. Col. W. N. Donovan, M.C., at the U. S. Army Hospital, Fort Knox, Ky., 24 men with mumps were given 500 mg. of aureomycin four times a day for twelve doses and 24 others received general supportive therapy only. No significant differences were noted between the two groups in duration of parotid or submaxillary swelling, fever, hospital stay, or total illness.

Among men given the aureomycin 9 had complications, as did 7 of the others. The complications consisted of orchitis in 14 cases and meningoencephalitis in 2. Pancreatitis was not observed. Oropharyngitis appearing in 1 case may have resulted from the aureomycin therapy.

Aureomycin in mumps. J.A.M.A. 150:465-467, 1952.

Site	Present Cures	Case-finding Method	Cures Possible
UTERUS			
LUNG			
BREAST			
RECTUM			
MOUTH and THROAT			
SKIN			

Cancer detection is aided by use of available technics applicable to most of the common types of cancer.

Early Diagnosis of Cancer

CHARLES S. CAMERON, M.D.
American Cancer Society, New York City

THE responsibility for the recognition of cancer while a cure is possible still belongs to the physician. The office instrument of greatest value in early diagnosis is a well-developed sense of suspicion.

As a result of education of the public to cancer's first signs and symptoms, delay in diagnosis from patient negligence has decreased. The physician thus sees smaller and less definitive lesions before classical symptoms appear, and the doctor's share of delay-responsibility is apparently increasing, remarks Charles S. Cameron, M.D. To achieve earlier diagnosis, the clinician must assume nothing, hope for nothing, but see that the nature of the lesion is determined at once.

The initial expressions of carcinoma are rather crude indicators. Cancer of the cervix may exist for years in a noninvasive stage before ulceration and abnormal bleeding occur.

Lung carcinoma is identifiable on roentgenograms well in advance of cough, expectoration, or chest pain, and the rate of resectability is twice as high in the asymptomatic stage.

When the tumor is quite tiny and symptoms have not yet appeared, carcinoma of the rectum can be felt in most instances and seen through the proctoscope in all.

The usual breast cancer is 4.5 cm. in diameter, and has metastasized in half of cases before being regarded seriously by the patient. A much smaller lump can be found by the women or the physician with little trouble.

Cancers of the cervix, lung, rectum, breast, mouth, and skin are now susceptible of discovery while small and asymptomatic, and a higher rate of resectability is possible if the lesions are treated properly at that time (see illustration).

Cancer detection centers are now set up in all parts of the country to discover asymptomatic tumors by examining persons who are presumably well.

The rate of cancer is now 0.8% per 1,000 examined, but the occurrence is 40 times greater in the group 60 years of age and older. Slightly more than half the individuals examined have nonneoplastic diseases and abnormalities calling for definitive diagnosis and treatment.

The physician's office may be an individual detection center in which periodic examinations may be performed.

Cytologic examinations have a

Recent trends in the early diagnosis of cancer. New York State J. Med. 52:2099-2102, 1952.

high rate of accuracy in detecting and diagnosing some cancers, but at the present time do not appear to be feasible for immediate large-scale screening of lesions of the uterus, lung, stomach, and prostate.

No simple biologic test has yet been devised that may be used as a cancer indicator.

Referred Pain from the Colon

HARVEY J. DWORKEN, M.D., FRUCTUOSO J. BIEL, M.D., AND THOMAS E. MACHELLA, M.D.

DISTENTION of the splenic flexure may produce pain in the precordium and in the left shoulder, neck, and arm as well as in the left upper abdominal quadrant. The attacks often are precipitated by emotional disturbances and relieved by expulsion of feces or flatus. Since the pain may resemble that with angina pectoris, the patients are sometimes needlessly committed to lives of cardiac invalids.

Harvey J. Dworken, M.D., of Western Reserve University, Cleveland, and Fructuoso J. Biel, M.D., and Thomas E. Machella, M.D., of the University of Pennsylvania, Philadelphia, studied the responses of 18 patients during distention of the splenic flexure by air inflation of a balloon; 11 had splenic flexure syndrome. The volume of air required to cause discomfort was 167 to 665 cc.

A 10-cm. condom balloon on a Levin tube, reinforced with an intraluminal coiled steel spring, is introduced through a sigmoidoscope and passed into the splenic flexure or other parts of the colon by abdominal manipulation under the fluoroscopic screen. When the balloon is inflated, the patient is asked to describe the location and character of the pain or discomfort. Distention of the distal colon other than the splenic flexure is not likely to cause pain above the diaphragm.

In patients with the splenic flexure syndrome, spontaneous attacks are simulated by distention at the splenic flexure. Discomfort is reported in the left upper quadrant, in the precordium, and in supradiaphragmatic sites of possible reference of coronary pain, such as the left shoulder, neck, or arm.

In 6 of the 7 control subjects, balloon distention of the splenic flexure produced discomfort restricted to regions below the diaphragm, with 1 also reporting substernal pain.

Distention does not alter the patient's electrocardiograms, whether or not the splenic flexure syndrome is present.

Subdiaphragmatic reference of pain from the colon. Gastroenterology 22:222-228, 1952.

Variable responses to digitalis in heart failure may be explained by the hypodynamic state of the heart.

Dynamics of Heart Failure

JOHN MC MICHAEL, M.D.
University of London

FOR the past five years, cardiac catheterization and other modern technics have been changing our concepts of heart failure.

The term heart failure is too loosely employed. A high venous pressure may represent a purely physiologic response of the overloaded heart, as well as a pathologic hypodynamic state. Apparently, an index of the latter is responsiveness to digitalis.

Cardiac output alone does not explain the complex behavior of right and left pumps; also significant are filling pressure in the chambers and the resistance of pulmonary or systemic arteries to each stroke.

The body's reaction to heart disease is to maintain the circulation. Many an invalid within an hour or two of death has a greater cardiac output than a healthy soldier standing at ease.

John McMichael, M.D., measured cardiac output, filling pressure, and arterial pressure under various conditions. Optical records were obtained during catheterization of the heart and large vessels.

Right ventricular pressure just before systole is normally 0 plus or minus 2 or 3 mm. of mercury, corresponding with values in the right atrium. As the ventricle contracts, pressure rises to a level between 15 and 30 mm. and is practically the same in the pulmonary artery.

A catheter passed down the pulmonary artery to the point of blocking allows backward withdrawal of arterialized blood from alveolar capillaries. Values are referred to as pulmonary capillary-venous pressure.

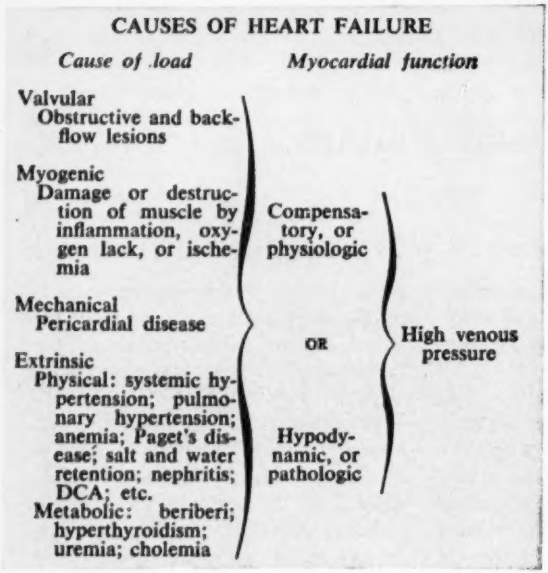
Cardiac output is determined by Hamilton's method. Dye is injected into an arm vein, samples are taken from the opposite brachial artery, and color concentration is plotted against time.

The dye technic is also used in computing mean circulation* time from arm to arm, and the approximate volume of blood between one arm vein and the opposite brachial artery, or intrathoracic blood volume, as described by Kopelman and Lee.

The manifestations of heart failure—breathlessness, venous congestion, engorgement of lungs or liver, and edema—vary greatly in causation and course (see table).

When the heart encounters severe strain, perhaps from a large pulmonary embolism, venous pressure mounts. The first rise may be

Dynamics of heart failure. Brit. M. J. 4783:525-529; ibid. 4784:578-582, 1952.



entirely compensatory rather than hypodynamic.

If the load persists and the heart hypertrophies, venous filling pressure may subside, showing adjustment to the strain. When strength is exceeded, muscles are more and more fatigued, and a pathologic state ensues.

An overworked myocardium with a high venous filling pressure may still behave physiologically, but if the heart becomes hypodynamic, pressure rises still higher, while less and less work is done.

Digitalis may complicate the picture with a bewildering maze of reactions. Although the drug has no measurable effect on the contractile force of a normally functioning heart, medication strengthens a failing myocardium. However, this action may cease in the terminal stage of disease.

Full intravenous doses increase peripheral vascular resistance for about half an hour. The heart rate is slowed, especially auricular fibrillation with a rapid ventricular response.

Right-side ventricular stress—Types of right heart failure should be understood because the secondary effects of left cardiac disorders are extremely complex. An example of a primary overload on the right ventricle is congenital pulmonary stenosis.

In expelling blood, the enlarged ventricle may produce enormous systolic pressures of 150 to 160 mm. Diastolic filling pressure is generally high, at times even with excellent myocardial function, but may be nearly normal with a pulse pressure of 100 mm. or more.

Increased right filling pressure may be entirely physiologic, in which case output will not be improved by digitalis.

The next stage of right heart failure is hypodynamic and well illustrated by emphysema. During an acute exacerbation in chronic bronchitis, the heart is forced to maintain higher pressure in lung vessels and a higher output than usual while supplied with blood containing less oxygen.

A somewhat similar state results from kyphoscoliosis. When right heart failure develops in such cases, digitalis may produce higher pulse

pressure in the ventricle with the same filling pressure. Yet at the same time, pulmonary resistance to blood flow may be so much exaggerated that cardiac output is hardly improved.

Left ventricular failure—Most forms of congestive failure affect the left heart first. High blood pressure initially causes hypertrophy, but when the left myocardium is fatigued, output of blood is maintained only by a high filling pressure that affects the pulmonary veins.

Pulmonary arteriolar resistance is generally so low that rise in pressure on the venous side is transmitted through the whole vascular bed to the pulmonary arteries.

Digitalis will commonly reinforce failing ventricular contractions, especially on the left, so that cardiac output improves and congestion in the lungs is relieved. In some cases, the drug raises moderate pulmonary hypertension to extreme heights and intensifies dyspnea for a short time: Occasionally the revitalized left ventricle simply removes the overload on lungs and right ventricle without changing the output of the latter.

Left ventricular failure may cause an increase of right ventricular and venous pressure that is well within the natural range. In other instances, such as ischemic heart disease in old age, cardiac failure may be about equal on the two sides.

Mitral stenosis—Effects of mitral stenosis on the lung contrast sharply with the type seen in left ventricular failure. Slight narrowing of the valve may not raise pulmonary pressure. In more than half the cases, however, resting values are high, and in a few instances, extreme hypertension results.

Some patients have enormously dilated left auricles with normal pulmonary arteries and remain comfortable for decades. The large auricle seems to act as a safety valve. Pulmonary pressure ascends during effort, then drops rapidly almost to normal.

In another type, the pulmonary artery is enlarged and has a fairly high pressure at rest. Levels are further elevated by effort but cardiac output is no greater, probably because lung arterioles contract.

Still other patients with mitral stenosis have much enlarged right ventricles and pulmonary arteries. Systolic pressures in the artery are 90 to 150 mm. at rest, and on effort may exceed those of systemic arteries. Pulmonary arterioles are evidently constricted.

With a fixed obstruction ahead, strengthening a failing right ventricle may only raise pulmonary vascular resistance still higher. Digitalis offers little relief, except for the reduction of tachycardia. Though drug therapy fails, surgery may be beneficial. Valvotomy may lower a pulmonary arterial pressure of 130 mm. systolic to 40 mm.

Tricuspid insufficiency—A rheumatic inflammation can all but destroy the tricuspid valve. During ventricular systole, blood collects in veins beyond the nearest functioning venous valves and, with diastole, flows into a central cavalauriculoventricular pool.

At times, mitral stenotic heart failure with pulmonary engorgement is relieved by development of tricuspid incompetence, which permits a large backward leak into the great veins. More often, spontaneous development of tricuspid insufficiency indicates extreme failure in the downhill course.

Pericardial disease—During pericardial effusion, venous pressure may rise just enough to maintain an effective filling pressure in the heart against external force.

In constrictive pericarditis, right ventricular pressure falls during early diastole, then rises steeply to a plateau which is maintained until the ventricle contracts.

Pressure in veins near the heart is high, but right ventricular pulse pressure is normal, in contrast to that in most other types of heart failure. Digitalis has no effect on the pressure curves, cardiac output, or venous filling pressure in such cases.

Acute nephritis—Heart failure barely distinguishable from the hypertensive form may occur with acute nephritis. In some cases, venous pressure is raised but not cardiac output, and neither responds to digitalis, apparently because the condition is not hypodynamic.

The cause of this type of heart failure is not known but may be either high blood pressure or retained salt and water.

Current impressions—Heart failure may occur at any level of resting cardiac output. Considerable improvement can appear without change in output if pressure, particularly in the lungs, is reduced.

Venous congestion results from various factors, including actual backward pressure from obstructed and incompetent valves, increased volume of blood, or a heightened tone of vessel walls.

Peripheral vascular reactions must be taken into account. In high-output failure with natural arterial pressure, vessels are dilated, as for instance, with anemia.

Low-output types are associated with vasoconstriction and cold extremities. Thus in a dying person with left ventricular failure, intense peripheral reactions may cause gangrene of the fingers and nose.

Some people with venous engorgement have normally functioning, though loaded, right hearts. Conversely, infarction may involve practically the entire right ventricle of a dog yet produce no measurable elevation of venous pressure.

The unitary concept of heart failure is no longer valid, but the sequence of events between the beginning of heart disease and development of congestive phenomena is still speculative.

Stimuli from life experiences may be of great importance in etiology and progress of diabetes.

Relation of Stress to Diabetes

LAWRENCE E. HINKLE, JR., M.D.
Cornell University, New York City

STEWART WOLF, M.D.
University of Oklahoma, Oklahoma City

EMOTIONAL strain may be an important factor in the onset and course of diabetes mellitus.

In periods of stress, blood sugar and ketone bodies fluctuate in healthy or diabetic persons, but more widely in the latter so that either hyperglycemia and ketosis or hypoglycemia may develop. A mental upset sometimes precipitates diuresis leading to severe loss of glucose and electrolytes, important in the development of dehydration and coma.

In explanation, Lawrence E. Hinkle, Jr., M.D., and Stewart Wolf, M.D., offer the following theory:

The metabolic pattern of diabetes is an adaptive response among vertebrates to carbohydrate starvation. To conserve what remains of dwindling carbohydrate stores, fat and ketone bodies are employed as fuel for muscular activity.

Some people respond to conditions involving loss of security as if threatened by starvation. Reactions may be due to inborn tendencies, strong conditioning, or both. The inappropriate adaptation may continue even while large amounts of food are supplied. Prolonged activity may result in irreversible diabetes, and when further trouble is encountered, the invalid has a relapse.

More than 50 diabetic patients, the majority with severe labile involvement, were observed for three months to four years. Personality and effects of mental strain were investigated in 10 to 100 sessions, and healthy members of a hospital staff served as controls.

Subjects came to the laboratory as if for simple blood sugar tests. Blood and urine were sampled at once and after an hour of quiet reading. During the next hour, events related to former ketosis or hypoglycemia were discussed, and blood was drawn every ten minutes. Urine was obtained, another hour was spent quietly, and final samples were taken.

In nondiabetic individuals, blood sugar varies little for three or four hours after eating. If fasting continues about sixteen hours, levels of 40 to 60 mg. per 100 cc. are noted. Circulating eosinophils fall, blood ketones mount, and urinary excretion of water and electrolytes

A summary of experimental evidence relating life stress to diabetes mellitus. J. Mt. Sinai Hosp. 19:537-570, 1952.

increases. Glucose then stops falling and may rise a little. If the subject is emotionally disturbed, reactions are exaggerated as if by starvation. The standard response is a drop in blood sugar, although values may be raised by overwhelming fear or anger.

Diabetics are more labile, and changes may be rapid and profound. In a menacing situation, blood sugar may vary 125 mg. per 100 cc. in ten minutes. Blood ketones, ordinarily stable in a calm period, are always heightened by a painful interview. If already elevated, values can be augmented by strain or lowered by reassurance, for example, from 20.8 mg. per cent on arrival to 2 mg.

Suitable stimuli may cause diuresis with no relation to sugar content of urine. Chloride loss as high as 25.2 mg. per minute, a rate of 1.5 gm. per hour, has been observed. If glycosuria is extreme, up to 490 mg. of glucose per minute, or 29.5 gm. per hour, can be excreted.

The same person may respond differently to various events. A woman becoming angry at a mother-in-law who is supporting her dares not express her emotion: ketonuria, polyuria, and dehydration develop. On another occasion the patient strikes her mother-in-law, relieves her feelings, and so has no ketosis. Another day, when driven carelessly in a car by her drunken husband, she is afraid to protest and becomes hyperglycemic.

The whole course of diabetes may correspond with emotional ups and downs.

Although a constitutional weakness may be chiefly responsible for the hyperreactive state, the only known factor in some cases is a psychologic ordeal.

Thus an anxious, insecure little girl has her first symptoms when moved from a familiar neighborhood to a new school. For a number of years, admissions for acidosis and coma follow episodes such as arguments with her mother, parental squabbles, or loss of a loved sister. Both mother and daughter are then given psychotherapy, which ends the necessity of hospital care.

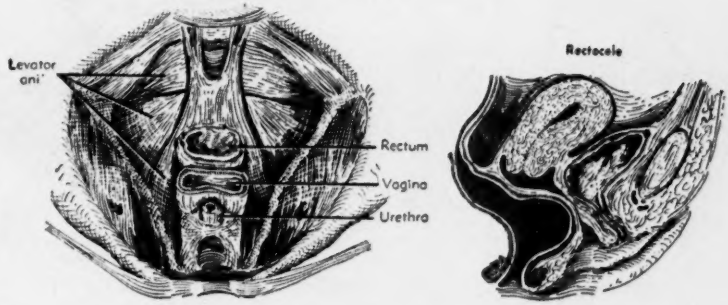
¶ ACTINOMYCOSIS may be eliminated by intravenous Stilbamidine after failure of other drugs. Effective therapy of a middle-aged man has been reported. Joseph M. Miller, M.D., of the Veterans Administration, Fort Howard, Md., Perrin H. Long, M.D., and Emanuel B. Schoenbach, M.D., State University of New York, New York City, recommend further trial of diamidines for blastomycosis and other severe yeastlike infections. In the case described, the initial dose was 0.05 gm. of Stilbamidine in 200 cc. of 5% glucose in distilled water. Two days later 0.1 gm. was given, followed by 0.15 gm. in another two days. This amount was then given almost daily for over two weeks. After a rest period of more than two weeks, dosage was continued daily for another two weeks.

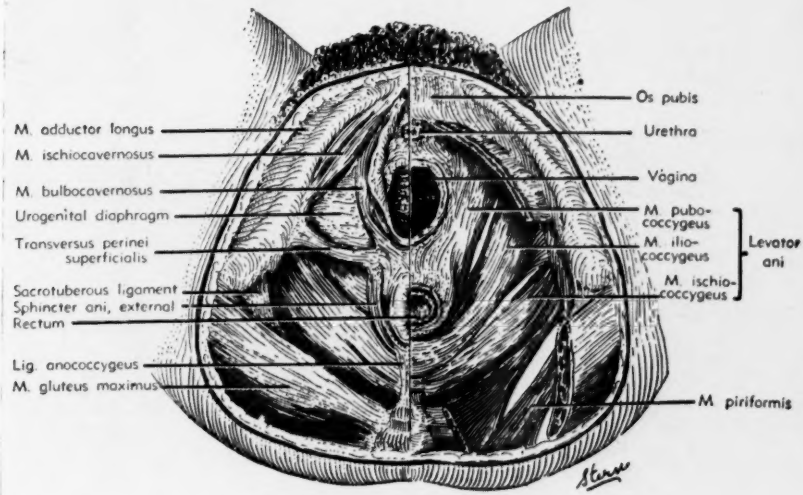
J.A.M.A. 150:35, 1952.

Perineorrhaphy

F. M. AL AKL, M.D.
Kings County Hospital, Brooklyn

Female perineum from within





Muscles of female perineum

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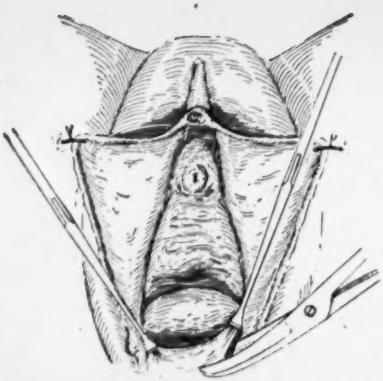
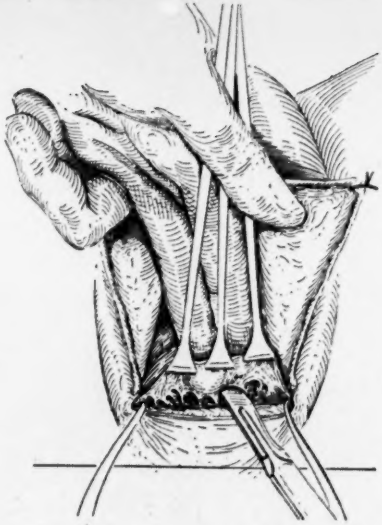
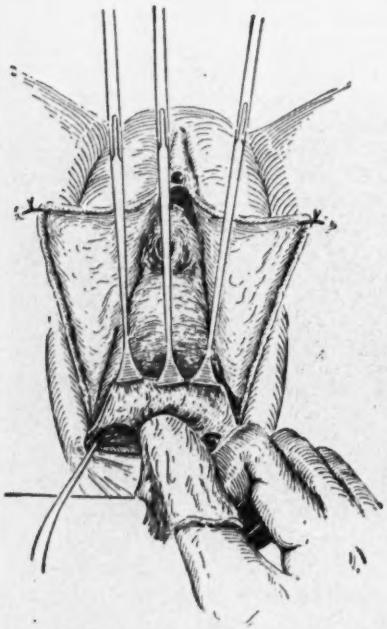


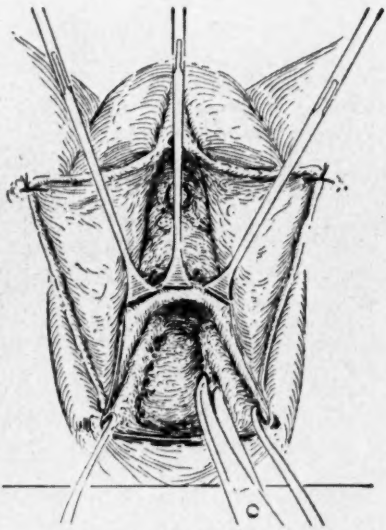
1. Place patient in lithotomy position. Prepare and drape perineal field. Suture redundant labia to adjacent skin. Apply 2 Allis clamps to mucocutaneous junction below level of each posterior caruncle; lift clamps and scissor the resulting mucocutaneous fold from perineal ridge.



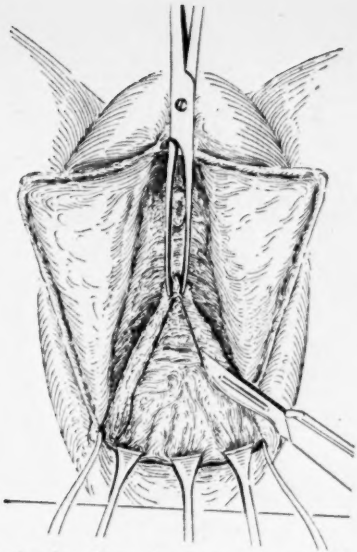
2. Spread angles of incision with self-retaining retractor; apply clamps to cut edge of vaginal tube. Lift clamps over tips of fingers; incise vaginal edge free from remnants of perineal body.



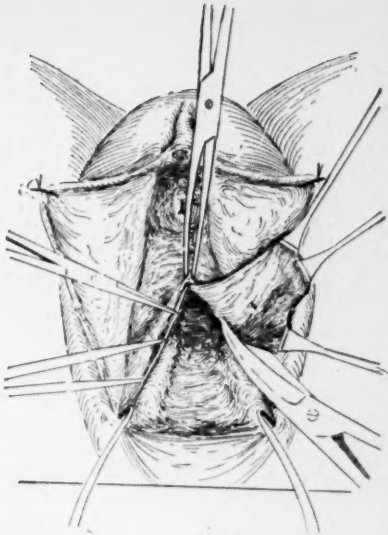
3. Continue dissection separating vaginal from rectal walls.



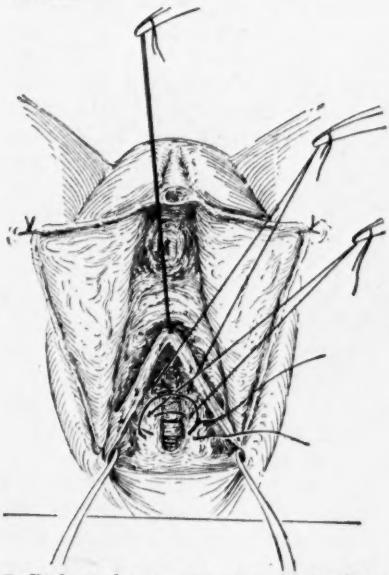
4. Follow dissection laterally liberating medial borders of levator ani muscles.



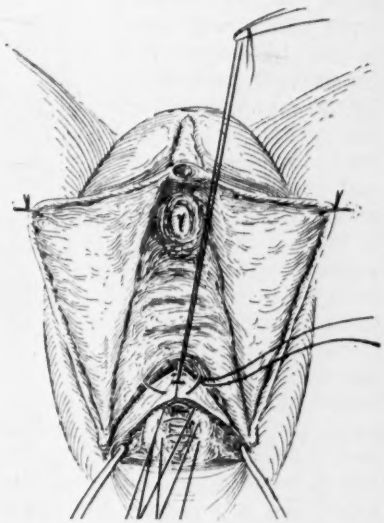
5. Apply clamp to crest of rectocele; mark limbs of the vaginal wedge to be excised.



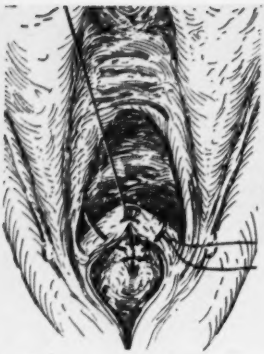
6. Scissor wedge and clamp any actively bleeding branches of vaginal artery. Suture apex and clamp for traction.



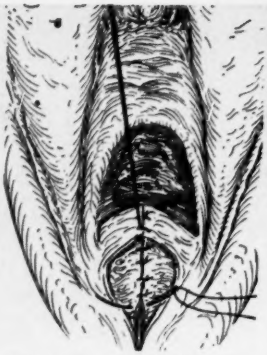
7. Pick up levator straps and introduce approximating sutures so that, when tied, a vaginal outlet of 2 finger-breadths will remain. Clamp sutures.



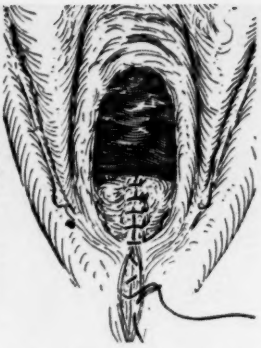
8. Approximate cut edges of vaginal tube halfway down.



9. Remove retractor; tie and cut sutures approximating levator straps. Anchor last vaginal suture or 2 to approximated levators.



10. Approximate the perineal fascia in midline.



11. Close skin with subcuticular suture. Clean vaginal cavity. Free labia, introduce strip of petrolatum jelly for drainage.

NOTES

In the embryo, the rectovaginal pouch of Douglas reaches down to the perineum. In the adult, the pouch is of variable depth and usually lower in the female than in the male. Occasionally a hernial sac develops when the peritoneum invades the rectovaginal space and dissects between the rectal and vaginal tubes. A bulge in the posterior vaginal wall therefore need not be the result of extraperitoneal pouching of the rectum, rectocele, but may be a dissecting hernia of the rectovaginal space, a cul-de-sac enterocele. A hernial sac, if found, is freed and opened, the peritoneum trimmed, and the sac closed preparatory to perineal repair.

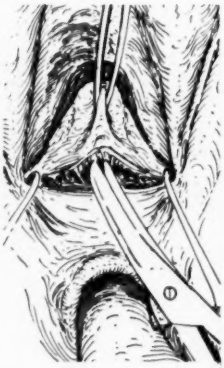


Figure 12

The distal end of the rectovaginal space may be obliterated by scar tissue, thus making differentiation between vaginal and rectal walls difficult. Whenever in doubt, the anal orifice should be exposed and a curtain clamped over it. Put on a second glove and introduce a finger behind the curtain into the rectum. Lift the rectovaginal septum, then pick up the layer with Allis clamp. Lift the clamp and scissor the fibrous bands between it and the rectal wall over the finger, finally entering the rectovaginal space (Fig. 12). The levator straps are at times picked up with towel clamps before suturing, or the rectal tube may be depressed with a finger in order not to injure the rectal wall while approximating the levator shutter. Both maneuvers are helpful, but if the rectal tube is properly freed, danger of injury is unlikely.

Whatever abdominal incision is used with infants, careful operative technic will reduce complications.

Abdominal Incisions in Infants

CHARLES D. KNIGHT, M.D., AND JOHN W. KIRKLIN, M.D.
Mayo Foundation and Clinic, Rochester, Minn.

HEALING of abdominal incisions is relatively less good in infants than in adults. Hence, meticulous care is essential in selection of the incision and in the technic employed.

The transverse incision is physiologic, causing little damage to the nerve supply of the abdominal wall, state Charles D. Knight, M.D., and John W. Kirklin, M.D. The incision provides excellent exposure and cosmetic results. Postoperative evisceration is rare because the wound edges tend to approximate themselves and crying, retching, and coughing only increase the tendency. The closure sutures will transect the stronger aponeurotic fibers and so ensure a firm incision.

The muscle-splitting, gridiron, incision is the most physiologic of all incisions, but the opening produced may not be large enough to permit exploration and is often difficult to enlarge without cutting muscles. When vertical incisions are employed, muscle retraction is better than muscle splitting.

Small mosquito hemostats placed with precision are desirable in pediatric surgery. Incisions should be closed in layers with the finest, interrupted, nonabsorbable sutures, the skin closed if possible with interrupted subcuticular sutures of 5-0 silk or a continuous removable stitch of fine steel wire. A collodion dressing is sufficient.

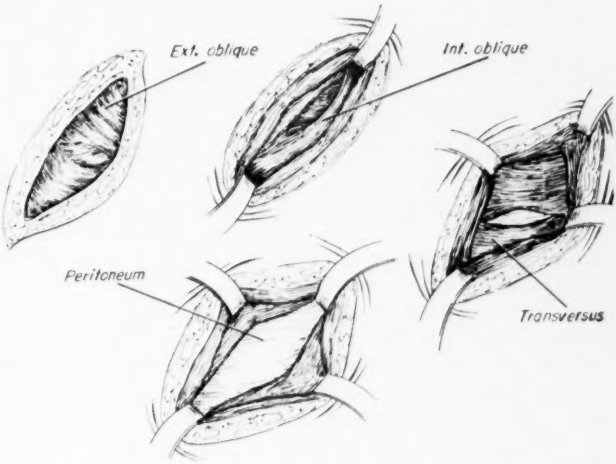


Fig. 1. Muscle-splitting incision for pyloromyotomy

Abdominal incisions in infants. Surgery 32:689-695, 1952.

A right subcostal gridiron incision, 1½ to 2 in. long, is used for *pyloromyotomy*. All muscle layers are split along the line of fibers (Fig. 1). The incision overlies the liver, which blocks any attempt of abdominal viscera to extrude through the wound during closure.

In surgical *exploration for small bowel obstruction* or *intussusception*, either a right paramedian or an upper transverse incision is employed (Fig. 2). When using the paramedian type, a vertical cut is made in the anterior rectus sheath, the muscle is retracted laterally, and the posterior sheath and peritoneum are incised vertically. After peritoneal closure, the rectus muscle is allowed to return to position, decreasing chances for postoperative herniation. The rectus of very small infants is thin and does not offer much protection to the suture lines, hence a transverse incision may be advisable.

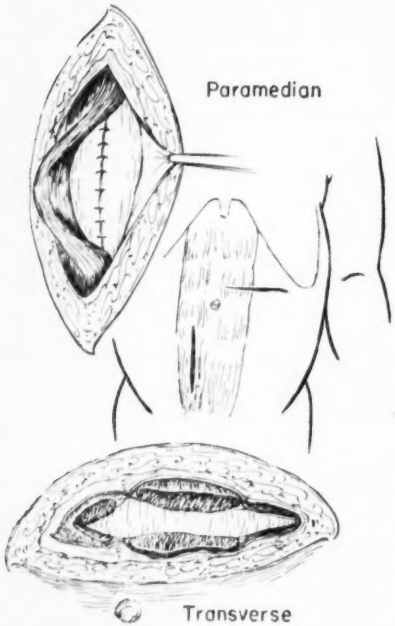


Fig. 2. Exploration of small bowel

An upper transverse incision, just above the umbilicus, allows exploration of the lower abdominal cavity also. If a left-sided incision is desired, the cut is begun about 2 cm. to the right of the midline and carried across to about the left anterior axillary line.

The most medial fibers of the right rectus muscle and the entire left rectus are divided, splitting a short distance into the aponeurosis of the left external oblique muscle. The posterior rectus sheath and peritoneum are incised transversely as 1 layer. Only the rectus sheath is sutured in closure, since this reapproximates the cut ends of the muscle, which heals by fibrosis.

A low left rectus muscle-retracting incision is used for the abdominal approach of a combined one-stage procedure for *correction of imperforate anus*. The incisions through the anterior rectus sheath and the peritoneum must be placed sufficiently lateral to the linea alba so that the muscle can fall back into place and separate the two incisions.

Both upper transverse and right paramedian incisions are used satisfactorily in *exploration of the biliary tract*. An oblique incision may also be utilized, extending from near the middle of the left costal arch, down and obliquely to the right, almost parallel to the right

costal margin. The right rectus muscle and the medial one-third to one-half of the left rectus are divided, with extensions laterally if necessary.

A transverse infraumbilical incision is very satisfactory for *appendectomy* in infants. The medial third of the incision lies over the rectus sheath. The aponeurosis of the external oblique muscle is divided in the line of the skin incision, while the internal oblique and transversus muscles are split in the direction of the fibers. After the anterior rectus sheath is opened, the muscle is retracted medially, care being taken not to injure the inferior epigastric vessels. Lateral extension is by muscle splitting. Such an incision seems more flexible than the McBurney and to afford somewhat better exposure. Healing is excellent.

Treatment of Malignant Melanoma

GEORGE T. PACK, M.D., DAVID M. GERBER, M.D., AND ISABEL M. SCHARNAGEL, M.D.

OPERATION for real or suspected melanoma should never be delayed. Radium and external irradiation are inadequate for primary therapy.

All growths require wide local excision or amputation of a digit, with or without radical dissection of adjacent lymph nodes. Frequently, so much skin, subcutaneous tissue, and fascia should be included that skin grafting or transposed skin flaps are required for closure.

The physician is often responsible for fatal procrastination, whether general practitioner, dermatologist, or surgeon. A lesion believed to be a nevus is removed and carelessly discarded or cauterized beyond histologic recognition instead of being sent to a pathologist for diagnosis. The true nature of the neoplasm is not suspected until the patient returns several months later with obvious metastasis.

George T. Pack, M.D., David M. Gerber, M.D., and Isabel M. Scharnagel, M.D., reviewed 1,190 cases observed at the Memorial Center for Cancer and Allied Diseases, New York City, from 1917 to 1950, with detailed records of 575 seen before 1945.

Only 12% of patients treated before 1940 lived ten years. Subsequently, radical methods were adopted routinely.

When definitive surgery was done within one month after adequate local excision for diagnosis, or when lymph nodes were free of metastases, about 40% of patients survived five years, usually a criterion of recovery. With later surgery, only 17% lived.

End results in the treatment of malignant melanoma. Ann. Surg. 136:905-911, 1952.

Homogenized milk feedings by jejunostomy are well tolerated by about 85% of patients.

Feeding by Jejunostomy

THOMAS BOLES, JR., M.D., AND ROBERT M. ZOLLINGER, M.D.
Ohio State University, Columbus

WHEN continued beyond a few days, intravenous feeding has serious shortcomings. Disadvantages include danger to cardiac patients, prolonged immobilization of the patient; and difficulty in providing adequate calories and proteins. The nasogastric tube is effective, but conditions often preclude use of this device.

In such circumstances, the jejunostomy tube may be considered, explain Thomas Boles, Jr., M.D., and Robert M. Zollinger, M.D. Homogenized milk is practical as the basis for feeding, and the Stamm technic for producing a jejunostomy is safe and simple.

Although whole milk introduced directly into the jejunum will frequently produce cramps and diarrhea, homogenized milk, having relatively minute fat particles, is well tolerated in about 85% of cases. The milk alone is readily available, economical, and nutritionally complete. If additional ingredients are needed, as much as 60 gm. of starch hydrolysate and 50 gm. of protein hydrolysate can be added to each 1,000 cc. of milk and given over a period of days.

Feedings of 2,000 cc. of milk will more than meet the daily basic body requirements for potassium. But if potassium loss is excessive or a deficit exists, 1 gm. each of potassium citrate, potassium acetate, and potassium bicarbonate dissolved in 8 cc. of water can be injected directly into the jejunostomy tube three or four times daily. This will replace all but the most abnormal losses of potassium.

If significant amounts of bile are escaping through an external biliary fistula, as much as 500 cc. of the bile can be caught daily and reintroduced by the jejunostomy.

When milk is fed directly into the jejunum and therefore bypasses the stomach and duodenum, only 65 to 82% of the fat content is absorbed as compared to the 95% absorption that is achieved by mouth ingestion. This fat loss represents from 200 to 250 calories per 2,400 cc. of homogenized milk. If 1 cc. of sorethytan (20) monooleate is added to each 1,000 cc. of homogenized milk, normal or 95% absorption results.

Attempts to increase the caloric intake by raising the percentage of fat usually fail. Only a few patients can tolerate 8% fat mixtures for several days without cramps or diarrhea. Most patients cannot stand as little as 6% fat content for prolonged periods.

Critical evaluation of jejunostomy. Arch. Surg. 65:358-366, 1952.

To obtain consistently good results in the regulation of jejunostomy feedings, the differences among individuals require variation of mixtures and schedule. Regulation is usually done as follows:

For twelve to eighteen hours after creation of the jejunostomy, the tube is not used. Then, 50 cc. of 5% dextrose in water is introduced by an asepto syringe at hourly intervals. By the second day, 100 cc. of this solution is usually tolerated hourly. In general, 1,000 cc. of fluid may be given the first day, 1,500 to 2,000 cc. the next.

To promote peristalsis and thus avoid distention during the first twenty-four to seventy-two hours, as much as 30 cc. of liquid petrolatum may be injected into the opening at six- to eight-hour intervals during a twenty-four-hour period. Homogenized milk feeding is begun only after usual bowel activity is restored.

Starting with quantities of 50 cc. of milk hourly, the amount is gradually increased during the next one to three days to 200 cc. every three hours. Water and electrolyte are continued.

Fingertip Injuries

ROBERT H. CLIFFORD, M.D.

PRIMARY repair is usually the best treatment for a workingman's injured fingertip.

Amputation of a fingertip is a common industrial accident. Though the physical extent of the injury is minor, the consequences may be disastrous, even necessitating a change of occupation.

Preservation of a centimeter or so of finger length which terminates in a painful, useless tip is obviously undesirable. The function of the finger should be the prime consideration, emphasizes Robert H. Clifford, M.D., who reviewed all records of patients treated for amputation of the fingertip beyond the distal interphalangeal joint at Henry Ford Hospital, Detroit, between 1945 and 1949.

The three main types of treatment for this injury are [1] free skin graft to the stump, [2] pedicle graft to the stump, and [3] revision, with or without shortening, and primary closure. Most of the patients had been treated by revision, shortening, and closure; the fewest by pedicle graft.

The shortest period of disability, about one month, occurs after revision and closure and fewer patients have to change occupations. Patients are disabled over seven weeks when treated with free grafts and twelve weeks after pedicle grafts. Lack of sensation and poor tissue tone often result from pedicle graft.

Evaluation of three methods for finger tip injuries. Arch. Surg. 65:464-466, 1952.

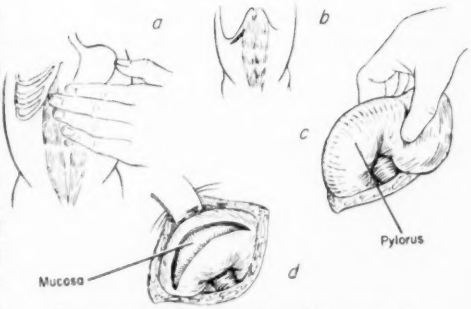
Splitting hypertrophied muscles that obstruct the pylorus will restore the pyloric opening to normal.

Hypertrophic Pyloric Stenosis

HAROLD F. RHEINLANDER, M.D., AND ORVAR SWENSON, M.D.
Tufts College, Boston

PALPATION of the abdominal tumor of congenital hypertrophic pyloric stenosis is possible in 90% of cases and is pathognomonic. Operation should be done promptly.

Harold F. Rheinlander, M.D., and Orvar Swenson, M.D., in reviewing 100 recent cases, find that the average patient on admission to hospital is 6 weeks old, weighs 8 lb., and has had symptoms for slightly over two weeks.



Palpation and operation for stenosis

Diagnosis

Projectile vomiting, failure to gain, and weight loss are the chief symptoms. The vomitus is clear, usually consisting of undigested food, but may be blood tinged, coffee ground, or yellow. Gastric waves are almost invariably noted after feeding, but this phenomenon is also observed with intracranial hemorrhage and other conditions.

Palpation is done while the child is eating or immediately after vomiting. The examiner stands on the patient's left side, and the index and third finger of the left hand are placed on the right rectus muscle above the umbilicus. Palpation should be downward through the muscle to compress the mass between the fingers and the posterior abdominal wall (Fig. *a*). The tumor must then be rolled to clinch the diagnosis.

If a tumor is not palpable, roentgen studies are made with barium. The typical roentgenogram shows a narrowing and elongation of the pyloric canal. Retention of large amounts of barium three or four hours after examination is suggestive but not diagnostic.

Treatment

If the diagnosis is made early and dehydration is slight, no parenteral fluids are required preoperatively. Otherwise a constant scalp intravenous injection is started and equal volumes of half normal saline

The diagnosis and management of congenital hypertrophic pyloric stenosis. J. Pediat. 41:314-319, 1952.

and 5% dextrose in water administered. The fluid is changed to meet known electrolyte requirements if the blood bicarbonate, sodium, potassium, or chloride levels are abnormal. The total volume given in twenty-four hours is 50 to 60 cc. per pound.

If the baby does not vomit after every feeding, small amounts of dextrose water may be given orally. If vomiting is severe or the stomach much distended, gastric suction is instituted.

Ether is administered by the open method with a stream of oxygen directed under the mask. The preferred incision is the gridiron, subcostal, muscle-splitting form, lateral to the edge of the rectus muscle, to eliminate possibility of evisceration (Fig. *b*). The stomach is grasped and the tumor delivered by traction (Fig. *c*).

The operation consists of splitting the hypertrophied musculature in a longitudinal manner, permitting the mucosa to pout outward, restoring the pyloric lumen (Fig. *d*). Nothing need be done to stop bleeding from the pylorus when the incision is made in the correct avascular area on the anterosuperior surface.

Extreme care must be taken not to open the mucosa. If perforation occurs, immediate closure is necessary and the area is covered by omentum as a safety measure.

The skin is closed with plain catgut sutures in the deeper layers of the dermis, and the wound is covered with a thin layer of collodion. A gauze dressing is not applied. The infant may be sent home in three to four days. The collodion will probably separate on about the seventh postoperative day.

As soon as peristalsis is audible, usually from four to six hours after surgery, 30 cc. of 5% dextrose solution every two hours is given. If this is tolerated for twelve hours, 30 cc. of formula feeding is given every two hours. The amount is increased, so that by the end of forty-eight hours a full amount is being given. The regimen should not be altered unless repeated vomiting occurs.

¶ PLATELET TRANSFUSIONS may be of value immediately before splenectomy for patients with idiopathic thrombocytopenic purpura or until bone marrow recovers in cases of acute aplastic anemia. Charles C. Sprague, M.D., and associates of Washington University, St. Louis, believe that the plasma of some patients with idiopathic thrombocytopenic purpura contains a thrombocytopenic factor that lowers the level of circulating platelets and damages megakaryocytes. In this disease the spleen apparently both removes sensitized cells and shares in the production of antibodies. Effectiveness of the procedure is limited by the occurrence of isoimmunization due to the incompatibility of specific thrombocyte groups and to decreasing survival of platelets after repeated transfusions.
J.A.M.A. 150:1193-1198, 1952.

Surgical treatment of vascular complications is made possible by anticoagulants to prevent thrombosis.

Operations on Large Arteries

NORMAN E. FREEMAN, M.D., AND FRANK H. LEEDS, M.D.
Franklin Hospital and University of California, San Francisco

ARTERIOSCLEROTIC lesions of the great vessels may be repaired by removal of an obstruction, by replacement of an involved segment with a graft, or by a shunting procedure.

Postoperative thrombosis, main obstacle to success, is now avoided by anticoagulant therapy.

Amputation, or disability from a single damaged vessel, may be prevented, often with amazing immediate results. However, some methods have been introduced too recently for final evaluation, and widespread arteriosclerosis is not affected by surgery.

Operative technics vary with the type and site of vascular injury. Ways of dealing with representative situations are described by Norman E. Freeman, M.D., and Frank H. Leeds, M.D.

A large obstructive clot may be excised with the surrounding intimal layer of the vessel. Thromboendarterectomy is possible because of the cleavage between the viable portion of vascular wall and the atheromatous plaque that is associated with the clot. The occlusive material is called a sequestrum.

For example, in a man with severe hypertension, the aortogram shows complete blockade of the abdominal aorta and of both iliac arteries, with partial closure of the left renal artery. Blood flows to the pelvis and legs chiefly through the superior hemorrhoidal branch of the inferior mesenteric artery.

After control of component arteries, the thickened intimal lining and clot are taken from the aorta and iliac vessels, and an organizing thrombus is cleared from the orifice of the left renal artery. On examination three months later, circulation to both legs is excellent and blood pressure normal.

In the limbs, free venous grafts are substituted for sections of artery, because a rupture may occur without an exsanguinating hemorrhage. Both homologous and autogenous grafts are employed.

If a popliteal aneurysm expands and becomes painful, a segment of femoral vein may be inserted. Good function has been noted as long as eighteen months postoperatively.

Free graft is too hazardous for abdominal aneurysm, however, as shown by a case with fatal rupture ten hours after replacement of the lower aorta and bifurcation by a corresponding segment of left common iliac vein.

When the aneurysmal sac is re-

Operations on large arteries. California Med. 77:229-233, 1952.

tained to support a vein inlay graft, repairs of the same region may be effective for at least a year and a half.

By-pass operations of several kinds are satisfactory. For a thrombosed aneurysm of the abdominal aorta, with clot extending from the common iliacs to the mouth of the celiac axis, the splenic artery is connected with the left iliac artery.

The aorta is then divided below the renal branches, the thrombus is removed with a uterine curet, the aorta is sutured, and the aneurysm is excised. Postoperatively, the left femoral pulse is palpable, and circulation to the right leg is adequate.

By-pass repair of a peripheral artery is illustrated by a case of severe obliterative arterial disease in both legs. Iliofemoral sequestrectomy is done on the left, and cellophane is wrapped around an aneurysm of the right iliac artery. About six weeks later, the right iliac artery is occluded, and toes of the right foot become gangrenous. In later films, however, the right superficial femoral artery is open.

The left leg is supplied mainly through the profunda femoris, indicating that the left superficial femoral artery is closed. At operation, the obstruction is seen at the adductor tendon, and the vessel is divided at this point.

After removal of the blockade, the left superficial femoral artery is transported beneath tissues of the abdominal wall and sutured to the patent distal end of the divided right common femoral artery.

The legs are now supplied by the left common femoral artery. Circulation to both feet remains good, and only the tip of the right fifth toe is lost.

¶ ERGOTAMINE-CAFFEINE is sometimes more effective against migraine and related vascular headaches when given in a suppository than when given orally as Cafergot. Absorption from the rectum is prompt and the side effects, principally nausea, are readily controlled by regulation of the dosage. The suppositories are taken at the onset of headache; ½ suppository is advisable for the initial dose. If ineffective, a whole suppository is used for the next headache unless the smaller dose caused side effects. For 100 patients with headaches of various types, Kenneth R. Magee, M.D., Martha R. Westerberg, M.D., and Russell M. DeJong, M.D., of the University of Michigan, Ann Arbor, prescribed suppositories of 2 mg. of ergotamine tartrate combined with either 100 mg. of caffeine, 200 mg. of caffeine, or 100 mg. of the latter and 0.25 mg. of Bellafoline substance. No difference was noted in the effects of the three formulas. The drugs brought complete relief within two hours in 35 of 57 cases of migraine and substantial relief for 12 of the others. Many patients with histamine headache also benefit. *Neurology 2:477-480, 1952.*

Interpretation to the patient of the defensive function of a tic is important in controlling the symptom.

Management of Tics

AVERY D. WEISMAN, M.D.
Harvard University, Boston

ALTHOUGH few people consult the psychiatrist because of tics and the neurologist sees only the severest forms, this treatable symptom is often encountered by the practicing physician.

Classification—The three characteristic features of the tic are: [1] involvement of functionally related groups of muscles, [2] association with irresistible tension relieved only by performance of the act and with anguish should the urge to act be denied, and [3] partial control by the will.

In the opinion of Avery D. Weisman, M.D., a tic is more closely related to a compulsion neurosis than to conversion hysteria, for both the tic and the compulsive ritual are related to increasing anxiety when inhibited and temporary gratification when performed. The motor symptoms of hysteria have no such associated tension and satisfaction.

Tics have been classified as primary and secondary. The former, a symptom of childhood, is attributed to overstimulation or excessive restriction of the child's spontaneous motor activity. The secondary tic is a motor phenomenon used by the adult ego as a defense against repugnant feelings, such as hostility, which press for expression.

Diagnosis—Inquiry into the patient's childhood reveals aggression-inhibition, hyperkinesis, and, 80% of the time, temper tantrums.

Huntington's chorea may appear tic-like, but can be recognized correctly from the family history, lack of concomitant obsessional traits, almost complete inability to control the movements voluntarily, and lack of tension when such restraint is possible.

The movements of Sydenham's chorea differ from tics in absence of repetitiveness, the general disturbance of motility, the exaggeration of all gestures, and objective signs of disturbance of muscle tone, coordination, and reflex activity.

Clonic facial spasm exhibits fleeting and isolated muscle contractions which cannot be reproduced voluntarily. Movement is almost continuous and cannot be controlled. No anxiety or gratification is associated with inhibition or performance of the movements.

Stereotyped acts and mannerisms are unlike tics in that no compulsive necessity is felt to carry out the acts and no satisfaction follows.

Treatment—Therapy consists es-

Nature and treatment of tics in adults. Arch. Neurol. & Psychiat. 68:444-459, 1952.

sentially in changing the tic into a more acceptable psychic symptom; the motor defense is transferred into a tolerable form of obsessional neurosis.

Treatment is directed toward getting the patient to understand the tic as a defensive act. The chronologic relation between the development of the symptom and various life situations is clarified. The patient is brought to realize that the apparently meaningless movements are protection against some unpleasant emotion. The understanding of both physician and patient is enhanced by observing the tic activity increase as significant emotional situations are discussed.

The patient who denies all emotion and therefore cannot see the connection between feelings and tic may more easily accept emotionality if the therapist employs such a generalization as, "Many people would have been angry in such a situation. How did you feel?"

Throughout therapy, the patient must feel accepted by the physician. Strong feelings of self-rebuke and inferiority and of anxiety and depression result from the recognition of unworthy emotions and demand support and sympathy of the doctor.

Umbilical Cord Lesions and Abortion

CARL T. JAVERT, M.D., AND BENNETT BARTON

CONGENITAL and acquired lesions of the umbilical cord should be considered as possible etiologic factors in spontaneous abortion.

The incidence of abnormal cord is greater than the incidence of pathologic fetus in spontaneous abortion. In addition, macerated, degenerated, and mummified fetuses have cord complications 4 times as often as do normal fetuses, state Carl T. Javert, M.D., and Bennett Barton of Cornell University and New York Hospital, New York City, who studied 1,000 consecutive spontaneous abortion specimens.

The abnormal cord often compromises fetal circulation and thus causes intrauterine death. This mishap can be suspected when a flurry of fetal activity, observed by the mother, is followed by cessation of movement. The uterus fails to increase in size and the fetal heart is not heard, even though the pregnancy continues for several weeks. Eventually, cramps and vaginal bleeding ensue and a macerated or mummified fetus is expelled, weighing less than would be expected from the menstrual age.

Congenital abnormalities of the cord are more frequent than acquired abnormalities.

Congenital and acquired lesions of the umbilical cord and spontaneous abortion. Am. J. Obst. & Gynec. 63:1065-1077, 1952.

Results of stilbestrol therapy in large dosage for various gynecologic disorders are reviewed.

Estrogen Treatment of Endometriosis

LEWIS M. HURXTHAL, M.D.
Lahey Clinic, Boston

ANNE T. SMITH, M.D.
St. Vincent's Hospital, New York City

RELATIVELY large doses of estrogen may be helpful in suppressing pelvic pain and bleeding. Also the size of uterine fibroids and the nodules of chronic cystic mastitis may be decreased, although the suppressive and shrinking effects are often only temporary.

Occasionally, treatment must be discontinued because of undesirable reactions. A prolonged course should not be given to a patient with a family record of carcinoma. Though probably not carcinogenic, estrogen may accelerate growth of cancer.

Dosage must be established for each patient according to severity of symptoms, therapeutic effect, and untoward reactions. Daily oral doses ranging from 5 to 50 mg. were used in 25 cases of endometriosis, 8 of menorrhagia with or without fibroids, and 2 of chronic cystic mastitis, by Lewis M. Hurxthal, M.D., and Anne T. Smith, M.D.

Hormone may be taken in several forms, such as diethylstilbestrol, micronized stilbestrol, dienestrol, and estrone sulfate. For persistent oozing and malaise from estrogen, testosterone propionate or testosterone cyclopentylpropionate may be added.

Endometriosis has been controlled with stilbestrol for as long as five years. The most satisfactory course practically eliminates menstruation and maintains good health by daily doses of 3 to 5 mg. No nodules are felt by pelvic examination.

Slight vaginal bleeding may be noted at rare intervals, but if the drug is withheld, painful menses return.

In other cases, pain is completely or considerably relieved, although sporadic bleeding is observed.

Thus, comfort may be provided for years before menstrual periods are gradually resumed with increasing pain.

Some women have only a little less pain than before, and a few menstruate in spite of large doses. Libido may be stimulated. In all instances, dyspareunia is alleviated throughout the period of treatment with stilbestrol.

Large *fibroid tumors* often contract or disappear during stilbes-

Treatment of endometriosis and other gynecologic conditions with large doses of estrogens. New England J. Med. 247:339-343, 1952.

trol therapy. When the patient is a poor surgical risk, 25 mg. a day may check bleeding immediately and reduce size of the neoplasm 50% in two years. However, a lesion may progress until removed by operation.

Menorrhagia from climacteric or other cause is arrested in four to six hours by 25 to 50 mg. of stilbestrol administered at intervals of one to three hours. The intravenous route is employed for rapid effect.

Profuse flow on the withdrawal or decrease of medication is generally stopped by the former or larger doses.

If preferred, 25 to 50 mg. of testosterone is injected three times a week for temporary relief of excessive menstruation.

In most cases of menorrhagia, dilatation and curettage, roentgen therapy, or hysterectomy is eventually done.

Chronic cystic mastitis may respond to 25 mg. of stilbestrol or 20 to 40 mg. of dienestrol given for several months. Judging from the few cases observed, painful nodules subside almost without trace with this treatment.

Side effects of estrogen cannot be foretold for an individual and may put an end to the course. About half the women treated have nausea, especially in the first two weeks, and the symptom occasionally persists.

A sense of bloating, labial and dependent edema, or pigmentation, soreness, and swelling of breasts may occur.

Infrequently, a psychotic reaction develops during treatment, or someone with heart disease has pulmonary congestion.

The *mechanism* of estrogen therapy is not fully understood. Large amounts may cause ovarian atrophy through inhibition of pituitary gonadotropins, and possibly the adrenal cortex is involved. Pregnancy can take place during induced amenorrhea.

¶ DYSMENORRHEA may be effectively controlled by oral niacin. The drug, a vasodilator and component of the vitamin B group, is given in 100-mg. doses twice daily as a dietary supplement and every two or three hours during menstrual cramps. Of 40 women with disabling distress treated by A. P. Hudgins, M.D., of Charleston, W. Va., 35, or 87.5%, obtained satisfactory results during a six-month trial. Flushing, the only side reaction reported, occurred only between menses and was usually limited to the women who benefited from the therapy. These subjects tolerated 200 mg. or more every two or three hours during seizures without discomfort. As the regimen also includes a nutritionally adequate food intake and additional vitamins in therapeutic amounts, both the vascular action of the compound and correction of a dietary deficiency may accomplish the improvement.

Am. Pract. 3:892-893, 1952.

When other measures fail, itching of the vulva may be relieved by a wide plastic undermining of the skin.

Surgery for Intractable Pruritus Vulvae

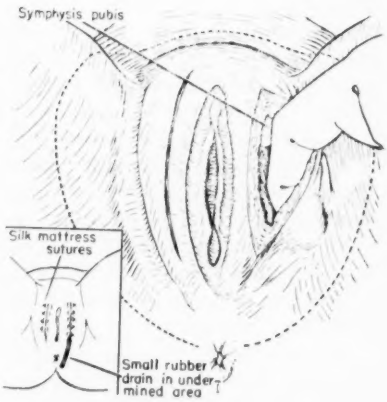
JAMES H. MERING, M.D.
University of Pittsburgh

WIDE plastic undermining of the skin of the vulva, thigh, perineum, and vaginal mucous membrane brings permanent relief in severe pruritus vulvae of unknown etiology.

Intense itching of the vulva is common among postmenopausal women and may be related to atrophy and decreased volume of circulation to the skin of the area after cessation of hormonal influence. When no specific etiology is known, the most successful types of therapy have been psychic, high-vitamin intake, subcutaneous administration of absolute alcohol, procaine, and local heat. Vulvectomy is used as a last resort but is quite mutilating.

When satisfactory treatment is not instituted early or therapy is unsuccessful, a vicious cycle of pruritus, scratching, worry, loss of rest, and impairment of mental and physical functions follows. Malignant change or leukoplakia may occur on the resultant unhealthy skin.

Undermining of the skin in the pruritic area utilizes the plastic principle of increasing circulation by delaying skin and pedicle flaps. A temporary anesthesia of the skin is created, interrupting the cycle and restoring the skin to a more normal state.



Undermining and closure

James H. Mering, M.D., employs the operation only if pruritus has existed continuously for two or more years without relief by local therapy and if leukoplakia, kraurosis, or malignant growth has not occurred. The possibility of *Trichomonas,* pediculosis, *Monilia,* or diabetes is first eliminated.

One incision, 4 to 5 in. long, is made at the junction of the skin and labia majora, preferably in the deepest fold, and carried down to the fascia, preserving the subcutaneous areolar tissue. The skin is widely undermined by blunt and

A surgical approach to intractable pruritus vulvae. Am. J. Obst. & Gynec. 64:619-626, 1952.

sharp dissection to include several inches of thigh, 3 to 4 in. outward into the inguinal area; carried upward over the symphysis to a level well above the pubic bone; and downward around the rectum and over the perineal skin area (see illustration). Medially, the vaginal mucous membrane is undermined to a level exposing the bulbocavernosus muscles.

After complete hemostasis, the procedure is repeated on the opposite side. When dissection is complete, a good portion of the vagina and vulva can be lifted away from the surrounding tissues. Both fingers meet in the midline above the symphysis, beneath the perineal skin, and well around the anus.

A small ½-in. Penrose drain is laid over the symphysis on both sides and brought out the lower ends of the incisions. A single layer of subcutaneous sutures is placed, and the skin incisions are approximated with mattress sutures of fine silk.

A light pack is put in the vagina and a Foley catheter in the bladder. A special pressure dressing is applied, using elastoplast adhesive over mechanics' waste or fluffed gauze to maintain constant pressure. The catheter is brought out through a window in the dressing.

Penicillin is given ten days postoperatively. The catheter is released three to four times daily, and the bladder is irrigated with sulfanilamide solution after each release. The pressure dressing is removed, an enema and cathartic given, solid foods started, and the patient allowed out of bed on the fifth day. Sutures and drains are removed on the sixth day and hot sitz baths are begun.

Washing the area with soap or detergents is strictly forbidden, and the patients are mentally conditioned to avoid touching the area with the hands. Clothes must not rub the vulval region. Tampax is advised during menstruation.

The circulation to both legs must be watched. Pressure on femoral circulation is easily allayed by small transverse cuts in the elastic adhesive.

The desire to scratch is immediately lost, and primary healing of the wound is complete by the sixth day. Further ulceration or excoriation of the undermined skin does not occur.

¶ STERILITY and amenorrhea of pituitary origin may be corrected by irradiation of the adenomatous gland. After roentgenographic diagnosis of a hypophyseal tumor in a 34-year-old woman with visual disturbances of many years' duration and amenorrhea for nine years, Ira I. Kaplan, M.D., of Bellevue Hospital, New York City, administered high-voltage roentgen treatment. The dosage was 2,500 r to the central forehead and 2,000 r each to the right and left temporal areas. Vision became normal within two months. Six years later, at the age of 40, the patient had an uneventful delivery.
Am. J. Obst. & Gynec. 64:1175-1176, 1952.

Vertebral deformity and neurologic disturbances often complicate the treatment of curvature of the spine.

Management of Congenital Scoliosis

JOHN G. KUHNS, M.D., AND ROBERT S. HORMELL, M.D.
Children's Hospital, Boston

MOST cases of congenital scoliosis are caused by malformation of the spine.

Treatment may be complicated by anomalies of other kinds and by neurologic disorders. Usually, however, only periodic observation is required.

When the condition progresses and the thorax is displaced laterally, physical therapy and mechanical support are applied. Extreme asymmetry is modified by forceful reduction, followed by spinal fusion, usually after full growth is attained.

Scoliosis due to muscular and ligamentous contracture is remedied by stretching and use of a plaster shell in infancy.

In an ambulatory clinic, John G. Kuhns, M.D., and Robert S. Hormell, M.D., observed contracture in 5 children and vertebral abnormality in 165, of whom 99 were girls. Growth patterns were watched until adult life in 85 cases of various types.

The reasons for congenital deformity of the axial skeleton are obscure. The embryo may be influenced by heredity, maternal viral disease, nutritional disorders, pressure, or other factors.

Vertebral abnormalities are of 5 types: variation in number, form, or both, failure to differentiate, and unclassified massive growth.

Defects of the spine and ribs are usually associated with faulty development elsewhere, including gargoylism, encephalocele, dislocation of the hip, clubbed hand or foot, absence of toes, hernia or other visceral change, supernumerary breast, and hairy skin.

Both motor and sensory loss may follow an operation on a meningocele or encephalocele accompanying scoliosis, and other disorders result from pressure on the spinal cord or nerves caused by the spinal deformity. The commonest neurologic disturbance is shortening and atrophy of a leg, with discrepancies of ¾ in. to 5 in. at the end of the growing period.

Spastic, weak, or paralyzed muscles, urinary incontinence, trophic ulcer, and ataxia may occur. Muscular and neurologic irregularities generally require physical therapy.

Most patients originally have a single lateral curve in the thorax. The outlook is more hopeful with widely separated defects and multiple deviations. Compensatory bowing often develops during growth,

Management of congenital scoliosis. Review of one hundred seventy cases. Arch. Surg. 65:250-263, 1952.

and anomalies on opposite sides tend to balance each other. Occasionally the spine becomes practically straight.

A child with even slight curvature should be examined at least every six months until well grown. Measurements are tabulated, pictures and radiograms made.

Treatment is unnecessary if no symptoms develop, posture is good, and scoliosis becomes no worse. As a rule, observation alone is needed for cervical deformities, most of which merely broaden the neck, for atypical numbers of lumbar vertebrae, and for large unclassified lesions.

Changes in vertebral form or in both form and number may require physical therapy and perhaps support. Scoliosis progresses most rapidly when a single curve is located in upper or middle thorax. Periods of fast growth are critical, particularly adolescence.

If the curvature becomes more severe and body alignment is impaired, muscular coordination and strength should be improved by postural and mobilizing exercises. Imbalance with a tilted pelvis or shortened leg may be corrected by a lift on the shoe.

For progressive curvature with lateral thoracic displacement, a turnbuckle jacket or brace is worn until growth is completed or results are clearly unsatisfactory.

About one-fourth of those wearing corrective devices have no further increase in deformity, and curvatures in about half of the others progress less than 20 degrees. Scoliosis becomes much worse in some children, although a few have fairly symmetric curves and no symptoms at maturity.

Operations should be done for adolescents if curvature exceeds 30° without compensatory distortion, if deformity is increasing, and if the thorax has shifted sideways an inch or more from the midline.

The curve is lessened as far as possible by turnbuckle jacket, and spinal fusion is done. Supporting apparatus is worn until the fused region appears solid, then strengthening exercises are prescribed.

¶ **PAIN WITH BURSITIS** is usually abruptly terminated by a single local injection of hydrocortisone acetate (Reichstein's substance M or Kendall's Compound F). The substance has more profound antiinflammatory, antiallergic, and antifibroplastic effects than cortisone. Egmont J. Orbach, M.D., of New Britain, Conn., finds that the medicament elicits more rapid response in acute states than in chronic phases. In 5 instances of the former and 2 of chronic subdeltoid bursal inflammation, prompt and sustained subsidence was obtained with only 1 intraarticular injection of not more than 1 cc. of hydrocortisone suspension containing 25 mg. of the hormone. In 1 case, 5 treatments during fifty-seven days were necessary for complete relief of long-standing popliteal involvement.

J. Internat. Coll. Surgeons 18:159-163, 1952.

An anesthetic procedure is never "minor" even though the surgery to be done may be so classified.

Problems of Office Anesthesia

FORREST E. LEFFINGWELL, M.D.
College of Medical Evangelists, Los Angeles

PRINCIPLES of good anesthesia are universal in application, but danger is increased in office use. This hazard justifies the consideration of office anesthesia as a special problem, says Forrest E. Leffingwell, M.D.

Office equipment—Safety demands certain essential equipment.

A costly and complex gas machine is not necessary, but some means of administering oxygen under pressure should be available. Devices include a small cylinder of compressed oxygen connected to a well-fitting face mask with an attached rebreathing bag or the Kreiselman resuscitator, which is a hand-operated bellows employing air or oxygen.

A suction apparatus provided with adequate connections and tips should be immediately available. Procedures to place the patient in the Trendelenburg position if necessary must be planned ahead of time.

With the exception of curare, no drugs not commonly found in the office are required. Analeptics have little value in anesthetic emergencies.

Premedication, preparation, and planning—Instructions concerning preoperative fasting are more difficult to enforce when the patient is ambulatory than when in the hospital. Moreover, most patients given anesthesia in the office are trauma victims. Particular attention must be paid to preoperative preparation of such patients, especially to be sure that the stomach is empty. Even several hours after eating, physiologic functions are often retarded by pain and excitement. If any question exists as to the presence of food in the stomach, the pump should be used.

The best treatment of anesthetic complications is prophylaxis, for irreparable damage may occur quickly. A brief history and examination can reveal the status of the cardiac and respiratory systems; search should be made for removable dental appliances and loose deciduous teeth.

Before general anesthesia is started, atropine or scopolamine can be given to control secretions, but narcotics should be used sparingly in the office in order to reduce recovery time. Narcotics given intravenously save much time, being effective in minutes instead of the one or two hours required with hypodermic injection.

Agents, technics, procedures—Thiopental, although without anal-

Office practice of anesthesia. J.A.M.A. 148:1181-1184, 1952.

gesic properties, a powerful respiratory depressant, provides pleasant induction and is commonly used. Serious laryngospasm is always a threat with this agent.

Thiopental is satisfactory for short procedures, such as painful examination of tissues or changing of dressings, incisions of abscesses, and orthopedic manipulations. Operations in and about the mouth, nose, and throat should not be done in the office with thiopental unless the anesthetist can perform endotracheal intubation and has office equipment equal to that found in the surgery.

Laryngospasm may be interrupted by from 20 to 60 units of tubocurarine chloride by vein or from 1 to 3 mg. of decamethonium bromide. The physician should be prepared to maintain adequate pulmonary exchange if apnea is produced by these drugs.

Old people do not tolerate thiopental well and should be given especially dilute solutions; the agent should not be used for children or persons who have had asthma.

Ether is preeminently safe for office use, even though induction is unpleasant and vomiting common.

Vinyl ether and ethyl chloride should be used only long enough to induce anesthesia or for very brief procedures. Both drugs are dangerous. Scopolamine or atropine should be given beforehand to ensure a dry airway.

The generalized convulsions sometimes seen when vinyl ether is first started will cease promptly when the agent is withdrawn and the lungs inflated with oxygen. Vinyl ether should not be given to patients with liver disease. Ethyl chloride affects the heart as chloroform does, though less intensely.

For local infiltration, procaine solutions of 1% are effective, and relatively nontoxic. Action is prolonged by the addition of epinephrine. The latter should not be used, however, in annular infiltration of the digits.

Less tissue reaction occurs if procaine is dissolved in isotonic sodium chloride instead of distilled water. Injections should not be made when a needle is moved without aspirating to avoid intravascular injection.

Blocks of the sympathetic trunk should not be performed in the office because of the danger of inadvertent spinal injection.

Complications, resuscitation—If vomiting occurs, the patient is put in the Trendelenburg position and suction should be started at once. The patient may be rolled into the prone position with head and shoulders hanging over the end of the table. Young children can be held up by the neck.

The lungs should be inflated with oxygen in case not only of laryngospasm, but also of apnea or hypopnea from any cause. Mouth-to-mouth insufflation may be resorted to. Carbon dioxide is useless and may even be harmful. No injectable drug is known which will initiate breathing that has stopped.

Office procedures—The use of thiopental during fluoroscopic examination is dangerous, for the agent should never be used in the

dark. The safest anesthetic for this purpose is ether, despite explosion hazards. Induction to the second plane can be accomplished in an adjoining room and the patient brought into the fluoroscopy room at the last moment. A damp towel placed over the patient's mouth and nose will trap the ether vapor if the anesthetist's cupped hand is put loosely over the patient's mouth under the towel to provide breathing space.

Death during tonsillectomy is usually due to hypoxia, which frequently exists to an alarming degree throughout the procedure. Preliminary preparation is important and perhaps vital. A barbiturate should be given an hour and a half preoperatively and atropine a half hour before the anesthetic. Induction should not be forced and a flow of oxygen should be provided under the mask. The airway should be patent throughout the operation at any cost, even if this involves getting in the surgeon's way.

Sequelae of Bulbar Poliomyelitis

WALLACE LUECK, M.D., JOHN GALLIGAN, M.D., AND JAMES F. BOSMA, M.D.

PERSISTENT disability is frequent after acute bulbar poliomyelitis, report Wallace Lueck, M.D., of Minneapolis General Hospital, John Galligan, M.D., of St. Paul, and James F. Bosma, M.D., of the University of Utah, Salt Lake City.

During the acute illness, 50 patients had cranial nerve motor impairment. When reexamined seventeen to nineteen months later, 44 still had persistent or recurrent symptoms and 36 had corresponding demonstrable physical findings.

The pharynx was the most common site of disability, and symptoms incident to swallowing solid foods were the most troublesome. Nasal regurgitation of liquids continued in 16 of 33 patients who had had that difficulty in the acute stage. Significant changes in the contour of the posterior and lateral wall of the pharynx were noted in 2 cases. Palatal paralysis was observed in 25 patients; 16 continued to have nasal voices. Distinct impairment of function of divisions of the facial nerve was found in 17 of 25 originally involved.

No significant correlation is found between sequelae and the incidence of complicating respiratory infections. Disability is commonly aggravated by fatigue or excitement and improved by rest. The schedule of recovery is similar to that for patients with motor impairment after spinal involvement. Improvement in specific abilities usually continues longer and is greater for children than for adults.

Persistent sequelae of bulbar poliomyelitis. J. Pediat. 41:549-554, 1952.

Physical development and academic achievement improve with vitamin B_{12} supplements to children slow of growth.

Vitamin B_{12} for Growth Failure

NORMAN C. WETZEL, M.D., HOWARD H. HOPWOOD, M.D., MANUEL E. KUECHLE, M.A., AND ROBERT M. GRUENINGER, PH.D.

Children's Fresh Air Camp and Hospital, Shaker Heights Public Schools, and Western Reserve University, Cleveland

WHEN school children whose physical growth is measurably below par are given vitamin B_{12} as a dietary supplement, growth is promoted and scholastic work, behavior, and attitude improve.

Simple growth failure in children of school age is a generalized deficiency state. Academic progress and achievement as well as physical and athletic performance are invariably hampered. The disorder is increasing in this country, regardless of the socioeconomic status of the children's parents.

The entity is remarkably free of specific organic disorders or symptoms. Fatigue, dry skin, and loss of physique are rarely so pronounced as to be noticeable, but the condition is more apparent on a Grid record, where loss of physique in the channel system and slow down in rate of development can be observed.

When Grid records are reviewed, two facts are noted: [1] the steady regularity with which 2 out of 3 boys or girls conform to their pattern of development and [2] how stubbornly simple growth failure, once established, persists. The rate of gain in healthy children of school age is 1 level per month.

Distinction must be made between a child with growth failure and the one who is naturally small or slender. Adherence to family type cannot be accepted as a main cause of simple growth failure. Contributing causes are unsupervised diet, poor preparation and selection of foods, insufficient milk, poor home management, domestic stress and strife, repeated infections, allergy, hygienic neglect, and dental caries. Poor work at school but regular attendance at movies and television is significant.

Regardless of the original cause, nutrition is always involved in the processes that lead to the resumption of growth and ultimate recovery from growth failure, declare Norman C. Wetzel, M.D., Howard H. Hopwood, M.D., Manuel E. Kuechle, M.A., and Robert M. Grueninger, Ph. D.

In a study by the Medical and Health Departments of the Shaker Heights schools, the children's weights and heights, together with other measurements—grip and

Growth failure in school children: further studies of vitamin B_{12} dietary supplements. J. Clin. Nutrition 1:17-31, 1952.

back strength—to evaluate physical performance, were recorded regularly. The children were periodically examined by a physician. About 4,500 of these long-term Grid records are now available.

The average value of lag for children classified as growth failures is 14 levels, with a range of 5 to 30 levels. The duration of failure extends from one and a half to seven years. These values are representative of the degree of failure commonly found in the fourth, fifth, and sixth grades.

When 20 children with growth failure were given supplements of vitamin B_{12}, 2 X 5 μg. crystalline or concentrate equivalent, in tablet form for sixteen weeks orally each school day, with double amounts on Fridays and Mondays, or at home by a school nurse if the child was absent, 79% benefited. Of 16 subjects supplemented for six weeks, 7 responded.

Further studies have included larger numbers of children. The improved rates of gain in level lines per month are statistically significant. Moreover, teachers simultaneously remark that some of the pupils are improving in behavior, attitude, and scholastic work.

The renewal of growth takes place preferentially in children who have been gaining most slowly in the pre-supplementation period.

Stool Frequency of Newborn Infants

WILLIAM L. NYHAN, M.D.

THE number of stools passed by a newborn baby is apparently quite closely related to the infant's total food intake.

From a study of the stool frequency of 800 healthy infants, William L. Nyhan, M.D., of Yale University, New Haven, Conn., reports that the peak days for number of stools coincide with the days previously found to have the most feedings. The only significant difference between breast- and bottle-fed babies occurs in the early days of life when lactation is assumed not to have begun.

The number and variability of stools usually increase until the fifth day, then gradually fall. The peak occurs on the third through the sixth day. Bottle-fed babies on self-demand schedules have the most stools per day; breast-fed on self-demand are next most variable. Bottle-fed babies on strict scheduling are the least variable.

About 2% of healthy infants have no stools during the first week of life. Others have large numbers of stools. Since variation is so great, a diagnosis of diarrhea should not be based on the number of stools in a particular day but on careful examination of the baby and evaluation of behavior.

Stool frequency of normal infants in the first week of life. Pediatrics 10:414-425, 1952.

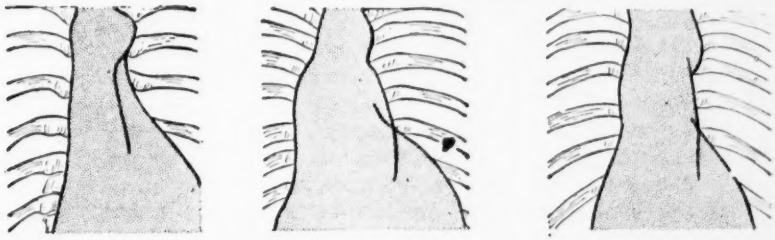
Indentation of left border of descending aorta above pulmonary artery is helpful sign of coarctation.

Sign of Coarctation of the Aorta

ANDRÉ BRUWER, M.B., AND DAVID G. PUGH, M.D.
Mayo Clinic, Rochester, Minn.

RIB notching is still the chief roentgenologic sign of coarctation of the aorta, but in about a third of cases the posteroanterior roentgenogram yields another valuable clue: a notch in the left border of the descending aorta just above the level of the left main pulmonary artery.

This notch, say André Bruwer, M.B., and David G. Pugh, M.D., represents the coarctate segment and, in about 5% of cases, is the only definite roentgenographic sign of coarctation in the posteroanterior view.



a *b* *c*

Tracings of roentgenograms showing normal thorax and notched aorta

The notching is not invariably caused by full-blown coarctation requiring operation but points to the probability of that condition and the need for further evaluation of the extent of the condition.

The nearer the left subclavian artery is to the coarctate segment and the more that artery is dilated, the more prominent the segment. The degree of notching depends on a number of other factors:

- The size of the aortic knot when the left subclavian artery originates at some distance from the segment
- The shortness of the pulmonary ligament and the amount of pull that ligament exerts on the coarctate segment
- The extent of the circumference of the aorta involved by the coarctate segment, at what tangent and vertical angle the x-rays strike the region of the superior mediastinum, and the position of the involved structures
- The size of the lumen of the poststenotic descending aorta.

In the diagrams is shown a nor-

A neglected roentgenologic sign of coarctation of the aorta. Proc. Staff Meet., Mayo Clin. 27:377-382, 1952.

mal thorax (Fig. *a*), a slight indentation along the left border of the descending aorta (Fig. *b*), and an indentation so pronounced as to give an overlapping double contour (Fig. *c*). The latter 2 are cases of coarctation.

Other roentgenographic signs of coarctation have been described but require special examinations or special technics to demonstrate:

Inconspicuous ascending aorta
Dilatation of the ascending aorta
Hypoplastic aortic arch
Visualization of the site of coarctation in the left anterior oblique position
Alterations of the barium-filled esophagus that correspond to the coarctate segment, to dilatation of the left subclavian artery, or to poststenotic dilatation of the aorta
Prominence of the left border of the superior mediastinum of the posteroanterior view, usually attributed to dilated left subclavian artery
Direct demonstration of the coarctate segment by angiocardiography or direct retrograde aortography.

Hazards in Treatment of Skin Lesions

GEORGE GAETHE, M.D., AND D. F. MULLINS, JR., M.D.

OVERTREATMENT is a common error in dermatologic therapy. The physician aware of the dangers of some modalities of therapy will avoid many pitfalls, asserts George Gaethe, M.D., of Louisiana State University, New Orleans, and D. F. Mullins, Jr., M.D., of St. Mary's Hospital, Athens, Ga.

Wet dressings alone are the proper treatment for acute skin conditions showing predominantly redness, tenderness, and sometimes vesiculation and weeping. Ointments are useful for chronic conditions.

Before any form of phototherapy, including ultraviolet, infrared, or superficial roentgen irradiation, is instituted, the possibility of a photosensitizing condition must be considered.

Ultraviolet radiation may be fatal to a patient who has lupus erythematosus. Extensive exposure to sunlight should be avoided. Ultraviolet irradiation and prolonged sunlight are also interdicted with hydroa vacciniforme or porphyria; vitamin deficiencies, such as pellagra and urticaria solaris; and photodermatitis from contact with such substances as berlock or meadow grass.

Roentgen therapy is contraindicated in lupus erythematous and lupus vulgaris, photosensitivity, senile skins, moles, nevi, and dermatoses that tend to recur at the same site.

Pentavalent arsenicals may produce keratoses. In about 20% of these cases definite epithelioma eventually appears even after arsenic is discontinued.

Pitfalls in dermatology. New Orleans M. & S. J. 104:457-460, 1952.

Early correction of heterotropia increases the chances for normal eye development and avoids personality injury.

The Physician and the Cross-Eyed Child

RICHARD G. SCOBEE, M.D.
Washington University, St. Louis

NO parent should ever be told to wait and see if a child will outgrow crossed eyes.

The family doctor or pediatrician, usually the first to be consulted, must be ready to advise immediate treatment. The earlier squint is corrected, the better the chance for normal ocular development. The child's personality may be injured by psychologic scarring if the defect is not corrected before school age. Surgery is often necessary, and spontaneous recovery is extremely rare, in the experience of Richard G. Scobee, M.D.

Many a harassed mother with a perfectly normal baby rushes the child to a physician because a well-meaning friend has remarked that the eyes seem turned in. A small child has almost no bridge to the nose, therefore tissue at the inner canthus is redundant and relatively near the iris. When skin is pinched up over the nose, white sclera shows equally at outer and inner angles of the eyes, reassuring the mother.

The physician then holds a small bright light and attracts the baby's attention. If the corneal reflection of the light is approximately centered over each pupil, eyes are probably orthophoric.

At least 90% of children with heterotropia before the age of 6 years have an underlying anatomic defect. The same or a similar fault can be found in relatives with ocular deviation.

Strabismus appears in 2 major forms, the first at birth or, at latest, within the first year of life. Such cases are almost invariably caused by a fairly severe anatomic defect, which should be remedied by operation when the baby is 1 year old. The second type of cross-eye is not evident until the age of 2½ or 3 years.

All newborn babies are farsighted and have practically no power of accommodation. Since both the retina and the ciliary muscle are poorly developed, vision is temporarily blurred.

In time, the retina becomes more sensitive, and the baby learns to use the eyes as a team. The child begins to accommodate and converge, and at about 5½ years generally fuses the 2 ocular images well.

But if some anatomic flaw prevents development of the proper accommodation-convergence ratio, the eyes overconverge. Crossing is at first intermittent, then rapidly becomes more or less constant.

The brain will not accept con-

The physician and the cross-eyed child. Chicago M. Soc. Bull. 55:439-442, 1952.

fusing double images and receives only those from the eye with clearer sight. The less perfect view is suppressed by voluntary control until the effort becomes automatic.

Although vision in the crossed eye may be 20/200 or less, dysfunction is usually limited to a small blind spot in the center of the macula, and peripheral sight is unaffected. Strictly speaking, blockage is not retinal but originates in the visual cortex of the brain.

Suppression amblyopia is a conditioned reflex that is stimulated by fixation of the macula on the good side. If the seeing eye is covered, the ineffective macula may be used.

The first step is careful refraction after atropine. The full degree of hypermetropic and astigmatic error should be determined. The better eye must be covered at once, during all waking hours.

Treatment continues until visual acuity is about the same on both sides. If the eyes are not straight by this time, a slight turn may be counteracted by orthoptic exercises. A more serious deviation probably requires surgery.

A child whose dysfunction is overcome before he learns to fuse may have binocular single vision.

Electrolyte Imbalance after Ureterosigmoidostomy

C. D. CREEVY, M.D., AND M. P. REISER, M.D.

ABSORPTION of urinary chlorides through the mucosa of the colon after ureterosigmoidostomy can cause hyperchloremia and acidosis.

Factors that have been regarded as promoting this absorption—the surface area of the colon mucosa exposed to urine, prolonged retention of urine in the colon between voidings, and variations in the absorptive capacity of the various segments of the large intestine—are of less importance in producing or preventing hyperchloremic acidosis than is the functional capacity of the kidneys, believe C. D. Creevy, M.D., and M. P. Reiser, M.D., of the University of Minnesota, Minneapolis.

Since some degree of hydronephrosis and pyelonephritis are almost inevitable after ureterosigmoidostomy, and since no practicable way exists of preventing absorption of the chlorides, the answer apparently lies in obviating infection and obstruction of the kidneys. Antibiotics are ineffective over long periods of time. However, a terminal colostomy above the anastomoses may prove to be a satisfactory countermeasure. Therefore, when cancer is not present, a preliminary colostomy followed by irrigations of the distal loop with antibiotics to prepare a clean field for the ureters seems desirable.

Observations upon the absorption of urinary constituents after ureterosigmoidostomy: the importance of renal damage. Surg., Gynec. & Obst. 95:589-596, 1952.

Two direct important indications for operation for congenital polycystic kidney are hematuria and pain.

Congenital Polycystic Kidney Disease

CHARLES C. HIGGINS, M.D.
Cleveland Clinic, Cleveland

ROENTGENOGRAPHIC studies aid in the early diagnosis of polycystic renal disease. Therapy is directed toward the prevention of fatal complications.

The condition is a massive involvement of the renal parenchyma by cysts of various numbers and sizes. The lesion is probably always bilateral and is slowly progressive, states Charles C. Higgins, M.D.

Origin is debatable, but the cysts may arise from failure of the secretory and excretory systems to fuse properly during embryonic formation of the kidney, a lack of union between the derivatives of the mesodermal nephrogenic cord and the ureteric buds. The patient may know of the disease in other members of the family.

If the parenchyma is not badly damaged at birth, a normal life may be led up to the second, third, or fourth decade. Then, because of increased renal involvement, flank pain and hematuria occur. The pain may be slight or severe, continuous or colicky, or so persistent as to become disabling. Renal bleeding is usually of short duration and intermittent. Chills, fever, lassitude, weakness, and loss of weight are prominent secondary symptoms.

Enlargement of one or both kidneys is the most important objective finding. When the enlargement is unilateral, the disease must be differentiated from a renal neoplasm.

Hypertension occurs in most cases. Urinalysis reveals red blood cells, increased pus cells, and low urine specific gravity. About half the patients have positive urine cultures.

Blood urea nitrogen is frequently increased, but symptoms referable to uremia are uncommon, since the nitrogen retention develops slowly. Hemoglobin values are low, especially in cases of prolonged renal bleeding or noticeable nitrogen retention.

A careful roentgenographic examination is essential for early diagnosis. The initial film reveals not only renal enlargement but coexisting pathologic lesions, such as calculi or bone abnormalities. Retrograde pyelography usually establishes the diagnosis.

As the cysts increase, the kidney calices become deformed, angulated, and elongated. Later the typical dragon deformity results. Intravenous urography is of value when the blood urea is within fairly normal limits.

Bilateral polycystic kidney disease. Arch. Surg. 65:318-329, 1952.

Hydronephrosis, pyelonephritis, and pyonephrosis may be associated with polycystic kidneys. Tumors and calculi are less frequent in occurrence.

Surgical procedures, other than renal operations, are well tolerated. Pregnancy usually entails no untoward results, but repeated childbearing should be discouraged because of the added burden on the affected kidneys as well as the possibility of transmitting the disease to the offspring.

The treatment of polycystic disease is preferably medical, but surgical intervention may be necessary. Neither type of treatment is curative but is instituted to prevent or deal with the complications that sooner or later will become a menace to life.

Strict medical supervision is imperative and, to secure complete cooperation, the patient should be informed of the condition. Abundance of water and a bland diet, rich in vitamins and low in protein, are prescribed. Chemotherapeutic agents are employed to control infection.

Iron and liver preparations are given for anemia, and blood transfusions if necessary. Bed rest and intravenous dextrose solution are advisable when nitrogen retention is high. Exposure to cold and to infections should be avoided.

The two direct important indications for surgery are hematuria and disabling pain. Profuse and continuous unilateral bleeding, uncontrolled by medical measures, may necessitate nephrectomy. Perinephritic abscess, calculosis, tuberculosis, and tumor are also indications for surgery. Adequate renal function, with, if possible, blood urea below 60 mg. per 100 cc., is a prerequisite for operative intervention.

Needle aspiration of noninfected cysts, and incision and drainage of those cysts which contain blood or pus, may at times relieve pain.

Uremia is the primary cause of death at an average age of 50 years.

¶ URETHRAL ANESTHESIA developing within three to ten minutes and lasting thirty to forty-five minutes is obtained with a 10% benzocaine and oxyquinoline benzoate solution in a bland, water-soluble base. The quinoline component effects bacteriostasis. Joseph E. F. Laibe, M.D., of Loyola University, Chicago, instills about 4 cc. of the liquid into the male canal with a bulb syringe and massages the material into the bladder. For women, a few drops are introduced with a cotton applicator or an eye dropper. The drug does not precipitate or cloud the field. No toxicity was observed in 772 patients subjected to cystoscopies, ureteral dilatations, and other surgical procedures. The material lubricates the instrument, obviating use of jellies, and, being water-soluble, is easily removed after the procedure.

Illinois M. J. 102:266-267, 1952.

Good results are obtained in cases of Hunner's ulcer by fulguration and dilatation, with anesthesia, followed by periodic dilatation.

Treatment of Interstitial Cystitis

GEORGE GILBERT SMITH, M.D.
New England Deaconess Hospital, Boston

FULGURATION of the affected area and bladder dilatation produce good results in interstitial cystitis.

The symptoms of interstitial cystitis, Hunner's ulcer, are typical, states George Gilbert Smith, M.D. The vesical capacity is reduced to sometimes as little as 100 cc. and, when the bladder is distended, intolerable pain occurs. If distention is great, bleeding may start from fissures developing in the affected area. Suprapubic pain may be constant and is sometimes to the right or left according to the position of the vesical lesion.

The cystitis is probably the result of obstruction to drainage of the main lymph collectors of the bladder. Obstruction can result from blockage by infection of a large number of lymph nodes draining the bladder, stoppage of lymph circulation by tumors and other pelvic surgical diseases, surgical interruption of collectors during pelvic operations, and blockage of anterior horizontal collectors. The blockage may cause a retrograde flow so that bacteria are carried to the poorly drained area.

The lesion microscopically shows a typical chronic simple ulcer, and the vesical wall is thickened and edematous in the area.

Interstitial cystitis. J. Urol. 67:903-915, 1952.

The treatment of Hunner's ulcer may be surgical, transurethral, or systemic.

Formation of a vesicovaginal fistula, ureteroenterostomy, anterolateral cordotomy, and presacral neurectomy with transection of the lateral sympathetic chains have been employed as surgical therapy.

Transurethral overdilatation of the bladder, ordinarily done with general or spinal anesthesia, together with fulguration of the areas of redness, especially the regions which crack and bleed, are the most commonly accepted measures employed in interstitial cystitis. The bladder capacity may increase 100% or more in the first few weeks after treatment, and much of the increment can be maintained if the bladder is dilated to the point of tolerance at frequent intervals, perhaps once a week, at least once a month.

Relief of pain may result from destruction of nerve endings in the ulcerated area. The increased distensibility is probably caused by the effect of fulguration upon the ulcer and upon the inflamed and oversensitive nerve endings. Improvement after less forcible distention may result because filling the bladder several times at each visit

acts as massage on the area of lymphatic stasis and stimulates the circulation locally or because improvement in the local circulation, by reducing edema and leukocytic infiltration, decreases the abnormal sensitivity of the nerves involved. The superficial ulceration produced by fulguration heals as a flat white cicatrix poorly supplied with nerve endings.

If the disease remains limited to one area and does not yield readily to treatment, wide resection of the affected area should be done.

Solutions of peptone and of neoarsphenamine have been given intravenously, and potassium iodide, alpha-tocopherol, ipecac, and estrogens orally with some temporary relief.

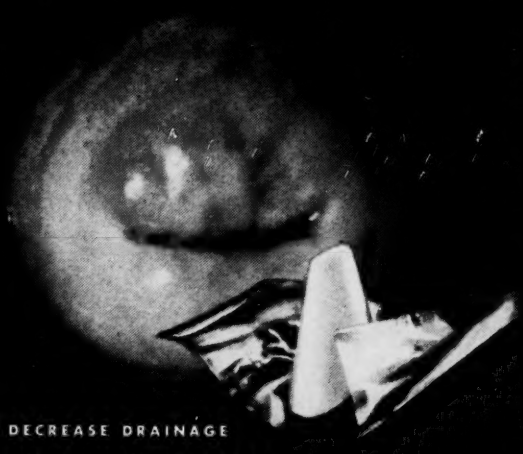
Women are more frequently affected than men. The great majority are apparently cured or improved if treatment is continued long enough. Freedom from pain caused by the bladder condition, ability to hold urine for at least two hours, and duration of the two criteria for at least one year constitute the basis for an apparent cure. The best results occur when fulguration is the most thorough.

About 40% of the women also have granular urethritis. Pain during urination is strongly suggestive of urethral involvement. This condition is treated by cauterization, light fulguration, and urethral dilatation.

The symptoms in men are somewhat different. Suprapubic pain is not acute, and occurs only when the bladder is overdistended. The chief complaint is frequent urination and an overwhelming desire to void when the bladder is filled to capacity. Bladder dilatation without an anesthesia is used for therapy, with electrocoagulation of localized areas of Hunner ulcer in a few cases.

¶ RENAL CALCULI may be prevented by subcutaneous injections of hyaluronidase. The action of the enzyme in increasing the protective urinary colloids and removing turbidity and sediment from the urine is due to the release of hyaluronate at the site of injection and restoration of the proper colloid-crystalloid balance, believe Arthur J. Butt, M.D., of the Butt Medical Foundation, Pensacola, Fla., Ernst A. Hauser, Ph.D., of the Worcester Polytechnic Institute, Worcester, Mass., and Joseph Seifter, M.D., of Philadelphia. The dosage of the substance, as Wydase, is 150 to 900 turbidity-reducing units in 1 cc. of isotonic sodium chloride solution administered subcutaneously every twenty-four to forty-eight hours. Of 24 patients previously afflicted with rapid production of kidney stones, 19, or 79%, remained free from lithiasis on this regimen for as long as twenty-one months. Overdoses are harmless, but inadequate amounts may result in a reversal of the intended effect—the phenomenon of sensitization.

J.A.M.A. 150:1096-1098, 1952.



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Literature on request

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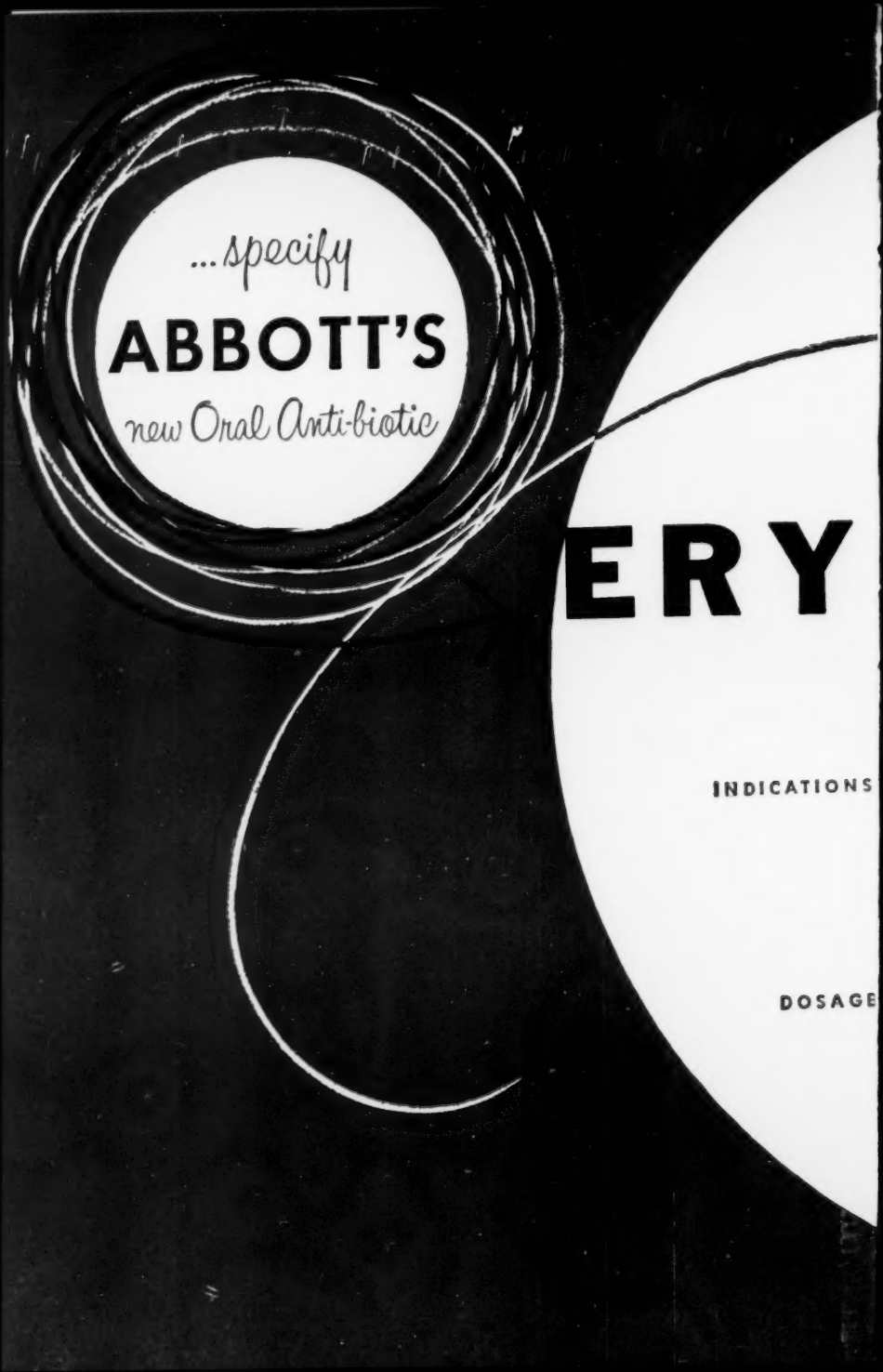
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Abbott

1. McGuire et al. (1952), J. Antibiotics & Chemo., 2:281, June. 2. Heilman et al. (1952), Proc. Staff Meet. Mayo Clin., 27:385, July 16. 3. Haight and Finland (1952), New Eng. J. Med., 247:227, Aug. 14.

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★ UNIVERSITY OF WISCONSIN, Madison--Enzyme deficiency may be a factor in cancer. Dr. James A. Miller finds that the azo dye used to produce cancer in laboratory animals combines with and possibly destroys the chemical effectiveness of certain proteins not essential to life but necessary for control of growth. This offers support for a protein or enzyme deletion theory of chemical carcinogenesis.

★ STANFORD RESEARCH INSTITUTE, Palo Alto--The world's greatest source of radioactivity outside of Atomic Energy Commission installations has been set up at Stanford's Radiation Engineering Laboratory. Five elements of Cobalt 60, collectively rated at 4,500 curies, emit more powerful gamma rays than would $80,000,000 worth of radium.

★ UNIVERSITY OF CALIFORNIA AT LOS ANGELES--Practical usefulness of a synthetic amino acid (6-methyl tryptophan) for poliomyelitis prophylaxis is to be defined by investigations undertaken by Dr. A. F. Rasmussen. Tryptophan has decreased the rate of paralysis in mice infected with the Lansing strain of virus.

★ STANFORD UNIVERSITY, San Francisco--More than 4,000 physicians and nearly 800 medical school seniors have been queried in developing a refinement of the Strong Vocational Interest Test. The new test, which will indicate not only whether a person is likely to enjoy being a physician, but also what kind--surgeon, internist, pathologist, or psychiatrist--represents analysis of 2,500,000 answers to test questions and three years of work by Dr. Edward K. Strong, Jr., and Col. Anthony Tucker of Army Medical Service Corps.

★ UNIVERSITY OF WISCONSIN, Madison--Much less than the three and one-half acres now devoted to feeding a citizen of the United States would suffice if all present knowledge of nutrition and farm science were applied. Dr. Conrad A. Elvehjem points out that in laboratory animals an ounce of growth can be obtained with every 2 oz. of synthetic food. Since human nutrition depends largely on natural foods the problem is more difficult. However, suggests Dr. Elvehjem, fortification of food might be more economical and efficient in the underdeveloped areas of the world than improvement of soil and of farm methods.

★ UNIVERSITY OF CHICAGO--An unknown source of estrogen exists in the female body, according to investigators working on the endocrine control of breast and prostatic cancer. Dr. Charles B. Huggins, studying hormones and hormone products in urine of cancer patients, finds that some women continue to produce and excrete estrogen after bilateral adrenalectomy and removal of ovaries.

LATE REPORTS *from Medical Centers*

★ OAK RIDGE NATIONAL LABORATORY--Living cells are damaged by any exposure to radiation from radioactive products, declares Dr. Karl Z. Morgan. Even the small amount of radiation man is constantly subjected to from cosmic rays does some damage, but the rate of repair is faster than the rate of injury. The maximum amount of external radiation exposure that can be endured for even fairly short periods is 0.3 rems (roentgen equivalent man). Excessive exposure predisposes to tumor, blood diseases, and cataracts and may actually shorten life.

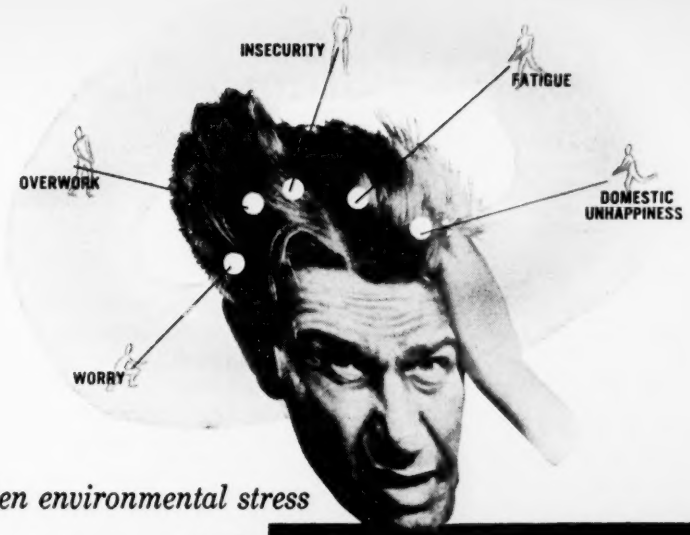
★ ST. LOUIS UNIVERSITY--Cells from the heart of a chick embryo have been kept alive a month, frozen at -350° F., without loss of vitality. The secret, says Dr. Basile J. Luyet, is the cooling of the tissues at a rate of several hundred degrees per second. Freezing occurs so swiftly that crystals do not have time to form and destroy the basic cell structure.

★ NAVAL MEDICAL RESEARCH LABORATORY, Camp Lejeune, N.C.--Bacterial suspensions considered sterile by all usual standards may be reactivated by exposure for twenty-four hours to sodium pyruvate and similar cellular metabolites, according to Drs. F. Heinmets, J.J. Lehman, and W.W. Taylor. Recontamination of sterile objects by contact with chemicals might have serious effects in disease prevention and public sanitation.

★ WASHINGTON UNIVERSITY, St. Louis--Viruses do not reproduce themselves, says Dr. Barry Commoner, but control the chemical processes of host cells in such a manner as to cause the host cells to duplicate the viruses. Like chromosomes or other reduplicating agents in cells, a virus can control the basic chemical processes of the cell and may be thought of, figuratively, as a free hereditary agent.

★ UNIVERSITY OF CALIFORNIA, San Francisco--After effects of brain concussion may be overcome by trypan red, a dye sometimes used in the treatment for epilepsy. Drs. Robert B. Aird and David Zealear and associates report that trypan red helps restore the delicate chemical balance maintained by the blood-brain barrier that often is upset by concussion.

★ YALE UNIVERSITY, New Haven--Gamma globulin is a temporary stopgap but not the answer to the prevention of poliomyelitis. The chief disadvantages, explains Dr. Dorothy M. Horstmann, are: (1) the problem of injecting the material at the right time, and (2) the vast amount of blood needed to prepare gamma globulin for widespread use. Given too long before exposure, the effect of gamma globulin wears off; given too long after exposure, no protection is afforded.



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Medical Forum

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Inhalation Test for Asthma*

QUESTION: Is the inhalation test better than skin tests for diagnosis of allergic asthma?

Comment invited from

Bret Ratner, M.D.
Charles H. Eyermann, M.D.
Albert H. Rowe, M.D.
George Piness, M.D.
Benjamin F. Gordon, M.D.
Henry D. Ogden, M.D.
G. Everett Gaillard, M.D.
Frank L. Rosen, M.D.
J. H. Black, M.D.
Carl L. Mauser, M.D.

► TO THE EDITORS: Drs. Irving W. Schiller and Francis C. Lowell present an interesting procedure in their use of the inhalation test for the diagnosis of asthma.

Were I to view this test as an important experimental method, I would readily agree that it has merit in correlating the value of the skin test with the inhalation method.

However, the question raised is whether the inhalation test is better than the skin test for the diagnosis of allergic asthma. My answer to this question would be an emphatic "No" for the following reasons: [1] The method is entirely too laborious and elaborate. [2] The test is dangerous because it might induce a rather severe shock reaction. [3] The nonspecific reactions to irritative extracts which the authors mention complicate the matter.

The fact that these authors state that the incidence of skin reactions is greater than the incidence obtained through the pulmonary test does not militate against the value of the skin test. The positive skin reaction inherently is an indication of a positive or a residual sensitivity and one cannot tell when the skin test plays its role as an indicator of a given allergic episode. It is, however, wiser to respect the validity of the skin test and to treat the patient according to its dictates.

The authors state that sensitivity in asthma from mid-August to the end of October is usually due to an expression of dust or ragweed hypersensitivity. If this were true, there would be little need for either the skin or inhalation test during this seasonal period and one could treat all cases with these two mixtures.

We have found in our work that this is far from the truth. Were we to treat our patients with dust and

*Modern Medicine, Oct. 1, 1952, p. 86.

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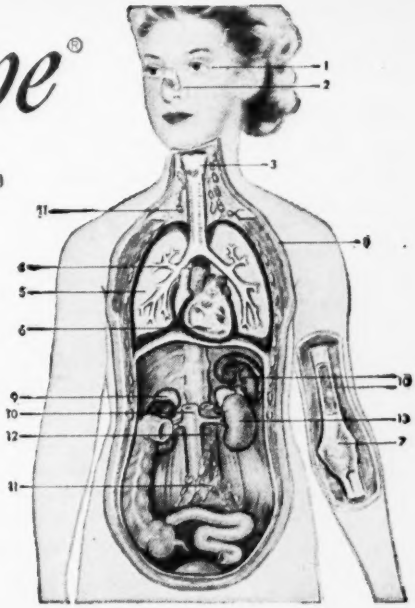

Primary Site of Pathology and Indications

1. EYE—Inflammatory eye disease. **2. NOSE**—Intractable hay fever. **3. LARYNX**—Laryngeal edema (allergic). **4. BRONCHI**—Intractable bronchial asthma. **5. LUNG**—Sarcoidosis. **6. HEART**—Acute rheumatic fever with carditis. **7. BONES AND JOINTS**—Rheumatoid arthritis; Rheumatoid spondylitis; Acute gouty arthritis; Still's Disease; Psoriatic arthritis. **8. SKIN AND CONNECTIVE TISSUE**—Pemphigus; Exfoliative dermatitis; Atopic dermatitis; Disseminated lupus erythematosus; Scleroderma (early); Dermatomyositis; Poison Ivy. **9. ADRENAL GLAND**—Congenital adrenal hyperplasia; Addison's Disease; Adrenalectomy for hypertension, Cushing's Syndrome, and neoplastic diseases. **10. BLOOD, BONE MARROW, AND SPLEEN**—Allergic purpura; Acute leukemia† (lymphocytic or granulocytic); Chronic lymphatic leukemia.† **11. LYMPH NODES**—Lymphosarcoma†; Hodgkin's Disease†. **12. ARTERIES AND CONNECTIVE TISSUE**—Periarteritis nodosa (early). **13. KIDNEY**—Nephrotic Syndrome, without uremia (to induce withdrawal diuresis). **14. VARIOUS TISSUES**—Sarcoidosis; Angioneurotic edema; Drug sensitization; Serum sickness; Waterhouse-Friderichsen Syndrome.

†Transient beneficial effects.

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ragweed mixtures for their asthma during this period, we would completely disregard the importance of cocklebur, mugwort, pigweed, goosefoot, marsh elder, a host of molds, and various other substances such as smut.

It is our habit in the treatment of allergy due to inhalants to include every single pollen, mold, and inhalant to which the patient has been found skin-sensitive. These are all combined in a single solution and the patient is treated for all of them. Were we to discard the information obtained from the skin test we would materially lose most of the benefits of the whole scientific approach to the treatment of allergy.

As a research method for the evaluation of certain facets of inhalant allergy, the inhalation procedure is important. As a method for the evaluation of clinical sensitivity, I see little merit in it except for patients who do not react to skin tests.

BRET RATNER, M.D.
New York City

► TO THE EDITORS: The inhalation test possesses the advantage of directly testing the sensitivity of the tracheobronchial system. To the simple method of inhaling allergen, either in dry form or in solution, and observing the effect by clinical observations, Drs. Schiller and Lowell have added a machine which records minimal changes in vital capacity and which can be correlated with the observable clinical response. Their test is made by measuring the vital capacity with the Benedict-Roth metabolism machine which records and indicates minimal changes in the respiratory movements in ink on the paper of a moving drum before, during, and after the inhalation of aerosols of standardized allergenic solutions by the patient.

To obtain reliable data, close cooperation of the patient is required. The test is time-consuming, not only in actual performance, but also in explanation of essential measures to the patient. Preliminary tests are also necessary to acquaint the subject with the method and to establish a base line for judging later measurements. The test must be done when the subject is free of asthma and one must guard against mechanical difficulties and leaks that may occur in the apparatus.

The cutaneous reaction to allergen indicates either past, present, or future clinical hypersensitivity and that one is dealing with an allergic individual. It should be stressed that the reaction to an inhaled allergen by this method occurs only in those patients who have positive cutaneous reactions. From the standpoint of the practitioner, the correlation of a painstaking clinical history with the information obtained from cutaneous testing is a good method of making the etiologic diagnosis of bronchial asthma. One avoids errors by realizing the delusiveness of the skin test and by knowing the occurrence, concentration, and distribution of an allergen likely to affect a given patient.

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It remains for future studies to decide whether the inhalation test, as performed by the authors, is better than skin testing. Apparently, the information obtained by inhalation is more often clinically applicable than that obtained from the skin test, but as yet all of the vagaries are not known.

After some forty years of clinical application, one does know most of the divergencies of the skin test. For the moment, the inhalant test is a useful tool in the clinical research laboratory; the skin test remains a useful method for the practitioner.

CHARLES H. EYERMANN, M.D.
St. Louis

► TO THE EDITORS: The inhalation pulmonary test in bronchial asthma was first advised by Stevens in 1934. The recent restudy by Drs. Schiller and Lowell will encourage its more frequent use. It is similar to the inhalant nasal test originally recommended by Blackley and later by Dunbar, Efron, and Penfound, Rudolph and Cohen, and Figley. It is the counterpart of ingestion or feeding tests with foods suspected of probable food allergy because of history or skin reactions or because of the history alone.

As in food allergy, skin reactions may be positive or, less often than in food allergy, negative to inhalants allergenic to the patient. And skin reactions may be positive without existent clinical inhalant allergy. This is substantiated by the negative inhalation reactions of some patients who had positive skin reactions, as reported by Schiller and Lowell.

As is true of a well-taken history of existent or possible allergies and of an environmental survey to suggest or reveal possible inhalant allergies, skin testing by the scratch method supplemented by intradermal tests, if desired with negative scratch-reacting inhalants, is very important. The inhalation test cannot replace such skin testing which, together with a properly taken history, indicates inhalants that require a clinical study.

The results of the inhalation test are easiest to interpret when the patient is symptom-free before pollen seasons or when he is not exposed to or is protected from other allergenic inhalants such as dusts or animal emanations. In the same way, feeding tests to determine allergenicity of suspected foods should be done only on symptom-free patients. The inhalation test might also produce slight, equivocal, or negative results in patients whose symptoms are controlled with specific desensitization therapy.

Positive results are indicated by production of wheezing and tightness in the chest with or without coughing and, as Schiller and Lowell discuss, by reduced vital capacity of the lungs. If moderate or slight asthma is present, the interpretation of the test becomes uncertain. Increase in symptoms and decrease in the already reduced vital capacity are difficult to evaluate accurately. In such cases, re-

lief of symptoms with environmental control and desensitization with suspected inhalants, as utilized for years with or without necessary control of frequent food and, in my opinion, infrequent infective allergies, usually are required. Thereafter, information about individual suspected inhalants from the pulmonary inhalation test may be obtained and is more dependable than in the uncontrolled asthmatic patient.

ALBERT H. ROWE, M.D.
San Francisco

► TO THE EDITORS: The members of our group have read with much interest the article by Drs. Schiller and Lowell concerning the inhalation test. The reactions of the entire group were similar and can be stated as follows:

- It is interesting and significant that no pulmonary reactions were produced except with the antigens which produced positive skin tests.
- We will agree that the present methods of studying asthma leave much to be desired, but we cannot agree with the conclusion that the "inhalation test is the most valuable" of available methods of study.
- Because of the time and equipment required for each test, as well as the interval necessary for recovery between tests, the inhalation method is not practical for routine study of asthmatic patients.
- Although the authors only infrequently encountered "a pronounced induced pulmonary reaction . . . followed later by asthma lasting a few hours," it is our feeling that the potential dangers of this method raise grave doubts as to whether it is justifiable for use even as an investigational tool, and certainly contraindicate its use as a routine tool.

In our opinion the authors do not offer adequate justification for their conclusions regarding the value of the inhalation test. The chief basis for such a conclusion would appear to be the fact that it gave negative results in the face of positive skin tests. This does not seem to us to rule out the significance of antigens which give positive skin reactions as contributing factors, at least. On the other hand, there was apparently no instance in which the inhalation test gave positive information when the skin tests failed to do so.

The observations reported by Drs. Schiller and Lowell concerning seasonal incidence of asthma due to pollen and that due to house dust are somewhat at variance with our own in Southern California, but we felt that these differences were readily explained on the basis of geographic and climatic differences. We have long been of the opinion that careful history taking, correlated with skin test results, offers the greatest hope for effective management of the allergic patient.

GEORGE PINESS, M.D.
Los Angeles

► TO THE EDITORS: Any test that depends for corroboration on the precipitation of an asthmatic attack is inherently dangerous and of questionable justification.

The accuracy of skin tests with inhalant allergens in conjunction with a carefully taken history is high up in the 90% bracket. Negative reactors should be hyposensi-

tized as the history dictates, or foods may require evaluation as possible offenders.

Many allergists recognize the synergistic or additive factor of dust allergy in conjunction with pollen asthma and advocate strict dust precautions during the pollen season.

Asthma which "spills over" the ragweed season into October or November is often due to mold sensitization, probably more so in the Midwest than on the Eastern seaboard because of the heavier seeding of molds in the "breadbasket" area.

House dust is admittedly an agglomeration of many household allergens, not the least of which is molds. Many patients with positive skin reactions to house dust also show positive reactions to molds, but the reverse is not necessarily true.

Asthma occurring in the absence of recognizable allergic or infectious causes brings forth the possibility of food allergy and miscellaneous contributory factors.

BENJAMIN F. GORDON, M.D.
Chicago

► TO THE EDITORS: I think that the work of Drs. Schiller and Lowell is extremely interesting, but feel that the inhalation test should not be regarded as an everyday diagnostic procedure. I can see where it might be dangerous in inexperienced hands. Too many medical men with no training like to regard themselves as competent allergists.

In my own practice I try to correlate skin testing with the clinical history and with careful, cautious, direct exposure tests. If I suspect sensitization to an inhalant substance but am not sure of it, the patient is instructed to make a more or less distant contact with the substance in question as, for example, going to within a few feet of a horse. Then, if no symptoms appear, a day or two later I have my patient make a much closer contact, even to the point of possibly riding the horse. This general principle can be used for other substances and is obviously safe when properly done.

HENRY D. OGDEN, M.D.
New Orleans

► TO THE EDITORS: Unquestionably, the inhalation test is more accurate but less practical than skin testing for the diagnosis of allergic inhalant asthma.

Since the inhalation test simulates natural contact with potentially allergic material by the allergic individual, it necessarily is a more accurate method of testing. However, it presents three drawbacks to general use.

1] The time element for complete inhalation testing would be prohibitive in private practice.

2] The amount of equipment and number of technical assistants to operate a busy practice would be difficult to maintain.

3] The potential of the constitutional reactions which are difficult to control would be greatly increased.

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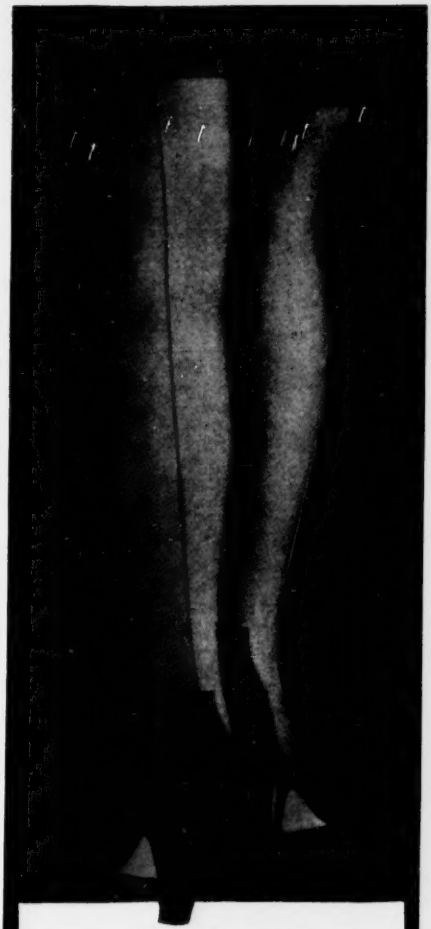

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an asthmatic is still the most important diagnostic agent." As time goes on we realize and recognize that an accurate history forms the diagnosis in the physician's mind, while skin tests often merely confirm the impressions that were obtained from the history.

Since most allergic asthmatics can be diagnosed by methods commonly used, it would seem that the inhalation test, while a scientifically accurate method, is definitely not as desirable for general use as the current skin-testing and history-taking methods.

G. EVERETT GAILLARD, M.D.
White Plains, N. Y.

► TO THE EDITORS: Theoretically, the inhalation test would be superior to the skin test for the diagnosis of allergic asthma, since it reproduces the symptoms in the shock organ involved. Practically, I lack the courage to try this method.

While Drs. Schiller and Lowell have a great deal of experience with this method and report no trouble in stopping the produced attack of asthma, I do not believe that this method of testing should be generally used, as cases have been reported in which asthma persisted for a week or longer after an inhalation test.

Therefore, I feel that this method should be reserved for experienced allergists engaged in research projects rather than for the practitioner.

FRANK L. ROSEN, M.D.
Newark

► TO THE EDITORS: I am quite willing to agree that inhalation of allergenic extract aerosols is more dependable in the diagnosis of the etiologic factor in asthma, but I am not sure that it is more useful than skin tests.

Anyone who has had much experience with skin tests recognizes their fallibility. All of us, I think, would agree that the production of asthma by a given material would be more certain evidence of etiologic importance than a skin test, but when one recognizes the fact that inhalation tests are slow and require a good deal of time and observation on the part of both physician and patient, it seems doubtful that this method would replace skin testing as the procedure of choice.

It is also stated by the authors that some rather severe reactions occurred which took some time to control and caused apprehension on the part of the patient and, possibly, the doctor as well. We do not believe that it would be wise to put this method into the hands of men who are not quite skilled in the treatment and care of the asthmatic patient.

Inhalation tests in the nose for the determination of the etiologic factor in hay fever have been used for some time in selected cases and have proved valuable and quite helpful but, in our opinion, these should be used in selected cases and not by those physicians who take care of only an occasional asthmatic person.

J. H. BLACK, M.D.
Dallas

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► TO THE EDITORS: We have had no experience with the inhalation method of testing. I can readily see that a patient with asthma would react if exposed to allergens which bothered him. However, I also feel that a patient with asthma would react to almost any inhalant that was irritating to his bronchial mucosa. I imagine that this has been taken into account and that the measurement of vital capacity is, perhaps, a good criterion to follow.

I feel that the inhalation test would be a difficult routine method when many allergens were possibly incriminated; however, it should be of some help when the question arises as to the allergenicity of one or two factors.

CARL L. MAUSER, M.D.
Oakland, Calif.

Direct Vision Adenoidectomy*

► TO THE EDITORS: Having fought and bled with the adenoidectomy-tonsillectomy problem for quite some years now, I was greatly interested in the Medical Forum discussion on direct vision adenoidectomy presented in *Modern Medicine* (Nov. 1, 1952, p. 124).

In general I agree with the comments of the several distinguished experts in the field. In my own work I employ the La Force adenotome followed by the ordinary adenoid curet, but I am opposed to preoperative examination with the left or right index finger and to postoperative digital confirmation with the same lethal weapon.

Some years ago I developed an instrument for visual examination before and after adenoidectomy, which for want of a better name I termed an adenoidoscope. This instrument was two-ended, one end being the adenoidoscope proper and the other end a tongue depressor of standard type. It is very easy to introduce this instrument into the mouth and under the uvula, which is thereupon gently lifted up on the shoulder of the instrument out of the line of sight. Adenoids or the postadenoid area is easily examined with light from a head mirror reflected through a window in the instrument.

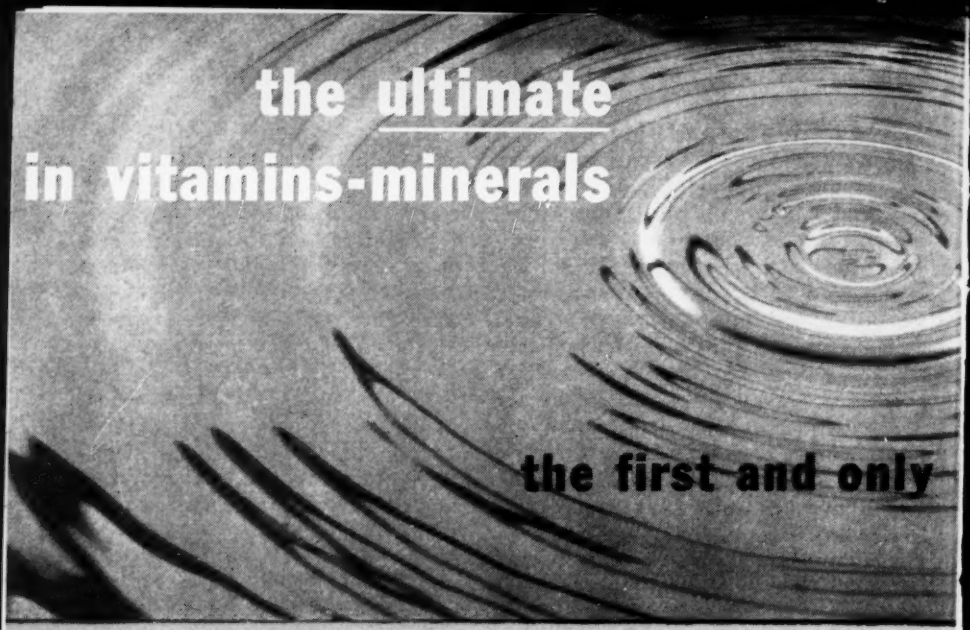
No discomfort is felt by the patient, except for a slight gagging tendency, and this is easily controlled by swabbing the uvula with a local anesthetic. For smaller children, a few whiffs of ethyl chloride suffice.

With this instrument, which is made in two sizes, preoperative examination is very satisfactory and likewise postoperative checkup is easily and thoroughly made. The instrument is also of considerable value when making routine nasopharyngeal examinations and in treatment.

In my observation, adenoids are often treated with scant respect in the course of a tonsil-adenoid removal operation; and even in the best of hands a recurrence is encountered, to say nothing of scar tissue adjacent to the eustachian orifice following a "too thorough" adenoidectomy.

J. B. H. WARING, M.D.
Wilmington, Ohio

*MODERN MEDICINE, June 15, 1952, p. 101.



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► TO THE EDITORS: In the Medical Forum on "Direct Vision Adenoidectomy," the comments were excellent and brought out the salient facts about adenoidectomy. There was one point, however, that was not stressed.

We have found, in a twenty-year study, that in practically every case in which nasal congestion recurs after the adenoids have been removed, there is an underlying nasal allergy that has not been recognized or treated. When tonsils and adenoids are removed to correct symptoms due to an allergic factor, a poor result is to be expected. This is why the symptoms persist postoperatively even though the operation has been performed thoroughly.

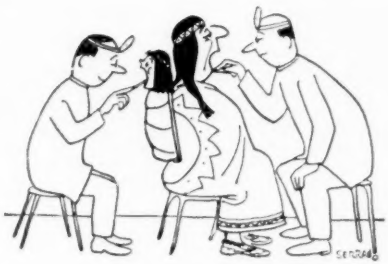
Adenoid tissue may be present after the original operation because of poor surgical technic. After reoperation, these children will be relieved and will remain symptom free because all the adenoid tissue has been removed.

Children who have had their tonsils and adenoids removed and whose symptoms, such as stuffy, runny nose or obstruction to nasal breathing, are still present, usually have an undiagnosed underlying allergic condition. Proper diagnosis of nasal allergy, a thorough allergic study, and specific treatment are necessary to relieve these symptoms. Further surgery is contraindicated until the allergic problem is under control. When this is accomplished, surgery may not be necessary.

The pathology of untreated allergy is to produce hypertrophic lymphoid tissue in the tonsil fossa or postnasal spaces. This was explained in a recent publication "Allergy and the Tonsil Problem in Children" (*Ann. Allergy* 7:329-333, 1949; *Modern Medicine*, Nov. 15, 1949, p. 81). We showed that when the tonsils or adenoids "grew back" following a tonsillectomy, there was recurrent lymphoid tissue in 27% of the allergic children in whom the diagnosis of allergy was not made prior to the operation. In those who had been diagnosed and treated for their allergic disease before tonsillectomy (indications being the same as for any nonallergic child), only 3% showed a regrowth of lymphoid tissue.

In other words, the allergy should be treated first and then the tonsils and adenoids removed if the indications are still present. This problem is also discussed in more detail in an article entitled "The Influence of Tonsillectomy and Adenoidectomy on Children, with Special Reference to the Allergic Implications on Respiratory Symptoms" (*Ann. Allergy* 10:568-573, 1952).

NORMAN W. CLEIN, M.D.
Seattle



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Case MM-232

THE CLUE

ATTENDING M.D: An interesting patient was admitted this morning whom I would like you to see. The chief symptom is intractable sciatic pain of one year's duration.

VISITING M.D: Has the pain been constant, progressive, intermittent, or severe?

ATTENDING M.D: No, not constant as to place or time. Intermittent for ten months. It began in the right lower quadrant, and the man, aged 40, was saved from an appendectomy when the pain shifted to the left inguinal region. He was saved again, this time from a hernia operation, for his physician then thought the trouble came from "weakness" of the inguinal ring. Within two months of the onset . . .

VISITING M.D: Sudden onset?

ATTENDING M.D: Well, over about a week. The pain next settled in the back, although aching continued in both inguinal regions. The backache was in the sacroiliac region and sometimes extended down both thighs, stopping at the knees.

VISITING M.D: What accentuated the pain?

ATTENDING M.D: Coughing, sneezing, motion; weather changes had no effect. The pain has been constant—in the back—for the past two months, and radiation depends on the exacerbating factors. There was no trauma.

VISITING M.D: What relieves the pain?

PART II

ATTENDING M.D: Codeine has been necessary for the past three

(Continued on page 154)

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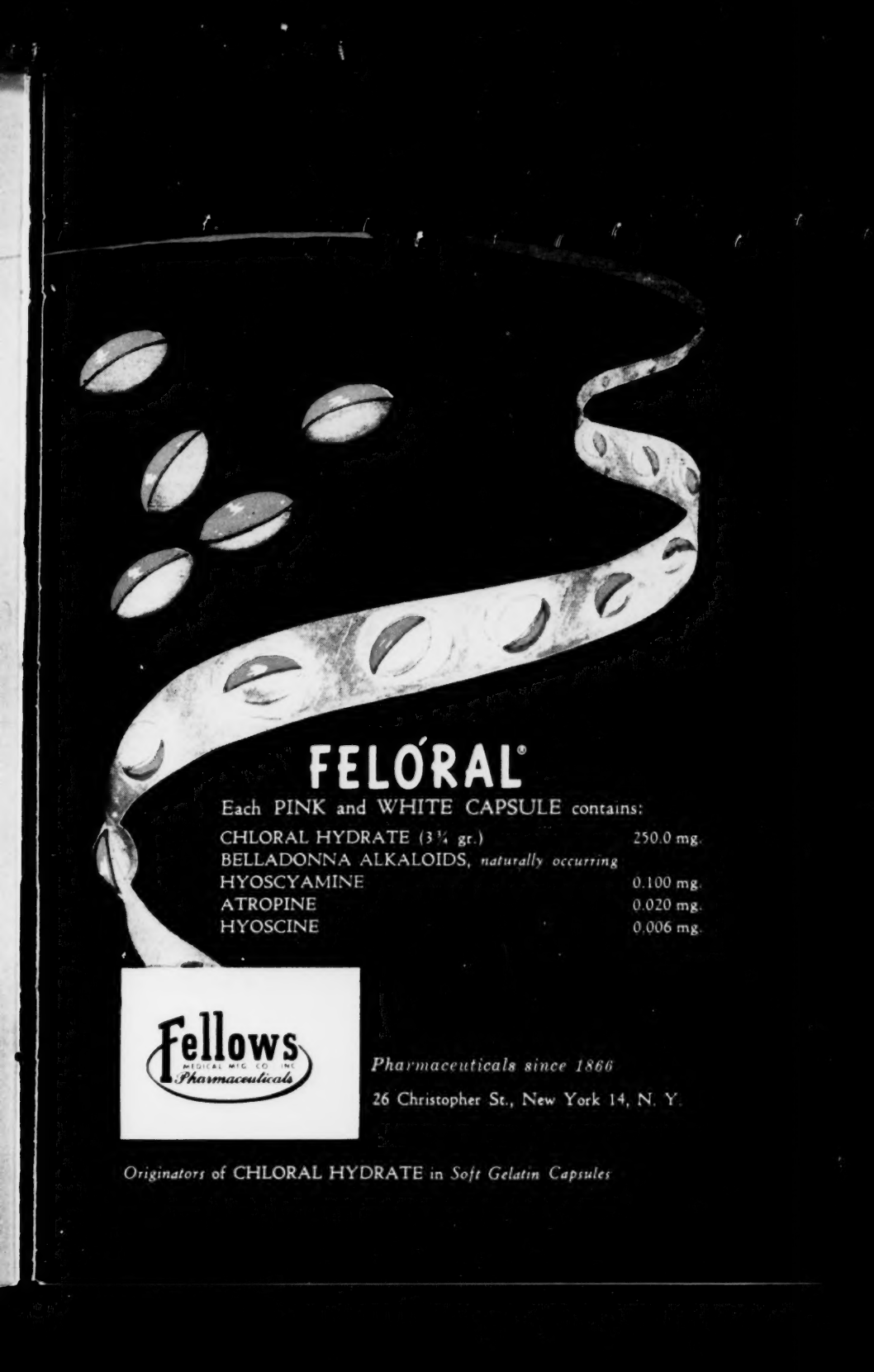
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months but merely dulls the pain.

VISITING M.D: So the pain *is* becoming progressive. What else relieves it? Standing, lying, being still, moving, heat?

ATTENDING M.D: He feels better when he stands up, although he doesn't move about. When the pain is worse he keeps out of bed.

VISITING M.D: Very interesting clue. Treatment elsewhere?

ATTENDING M.D: Again I am surprised, but for a year the serious . . .

VISITING M.D: and intraspinal . . .

ATTENDING M.D: Precisely . . . the serious intraspinal etiology of this pain was overlooked. The patient's teeth were all pulled out and . . .

VISITING M.D: No!

ATTENDING M.D: Yes! And salicylates, short-wave diathermy, and so on were given but no neurologic examination or spinal fluid study was made.

VISITING M.D: One sees this too often. Backache is, of course, common, and the diagnosis of disk must have occurred to his physician more than once, but . . .

ATTENDING M.D: I wish you would examine him. *(They enter the patient's room.)*

VISITING M.D: *(Examining patient)* Motion of back is moderately limited in all directions. There is bilateral lumbosacral tenderness and straight leg raising gives a bilateral positive reaction. *(Later)* Results of the neurologic examination are reported entirely negative.

ATTENDING M.D: So I found. Isn't that amazing with a progressive story of this sort?

VISITING M.D: Unusual rather than amazing for, in my experience, it is more common than one would guess that, with an appreciably large intraspinal lesion in this region, the neurologic examination is negative. Perhaps in as many as 10% of the cases—probably more. The negative objective evidence threw the general practitioner off the track, while the overwhelmingly positive history was not given due consideration. Let's perform a spinal fluid examination right now and get a spine roentgenogram. *(Spinal tray is brought in; the needle is inserted in the first lumbar space.)*

VISITING M.D: *(Continuing)* I am inclined to guess that he has a lumbar disk . . . . This is a surprise—complete block and the fluid is orange-yellow. *(They take a tube to the window, send the other tubes to the laboratory. There is an interval of some minutes.)* It coagulated on standing. Let's take him to the radiology department and get another spinal tray. *(This time the Consultant introduces the needle at the eleventh thoracic interspace.)* Here the fluid is clear. No block. A little blood, but undoubtedly traumatic. I think I'll try to put a little air in for contrast. Please lower the head of the table. *(Little air can be injected; the patient has excruciating pain.)* Let's see what the roentgenograms show. Get the

blood studies on an emergency basis so we can formulate our impression quick'y.

PART III

ATTENDING M.D: *(One hour later)* The spine roentgenogram reveals no bony deformity or defect. The chest film is normal and so are blood, urine, and sedimentation studies.

VISITING M.D: Spinal fluid protein?

ATTENDING M.D: Below the lesion, 8,000 mg. per 100 cc., and 360 mg. per 100 cc. above.

VISITING M.D: I think he has a spinal cord tumor in the region of the conus medullaris.

ATTENDING M.D: The conus?

VISITING M.D: Well, the average total protein in an ependymoma is in excess of 3,000 mg. per cent. I think the tumor is quite big. We cannot wait for crippling neurologic symptoms or for bony erosion. The neurosurgeon should be consulted tomorrow. Essentially the picture is of intractable root pain. Every case of low back and sciatic pain is not the result of a protruded intervertebral disk, which I first thought this man had. He had not had trauma, but then, trauma may initiate symptoms of intraspinal neoplasm also. In over 40% of our cases of cord tumor, trauma precedes the onset of symptoms. In most disk cases, the pain is intermittent, the erector spinae muscles are spastic, while limping and listing may or may not occur. Neurologic signs are slight, usually, with diminution or absence of Achilles reflex, with hypesthesia or anesthesia over a small segment of the surface of skin of the lower leg. In 2 out of 3 cases the spinal fluid protein is over 40 mg. per 100 cc., but rarely more than 100. Visualization by air, Lipiodol, iodized poppyseed oil, and Pantopaque gives more accurate delineation in the hands of experienced roentgenologists. Tumor progression is usually insidious and without intermittency to incapacity. Physical findings are scant, but neurologic signs are usually definite, with weakness, atrophy, reflex and sensory changes. Here we see some deviation from the rule. But all such generalizations are false.

PART IV

NEUROSURGEON: *(The following day)* About half the patients with tumor whom I operate upon are first presented to me as having disk syndrome. The average age for disk and tumor is about the same . . . just over 40. Now, about the question of intermittency of pain. I have just reviewed all the cases at this hospital and find the surprising observation that over 80% with tumor have had intermittent pain. The average duration of symptoms in the tumor cases before operation was six years. One other interesting finding was that in 40% of the tumor cases sciatic pain was unilateral, not bilateral, as we were taught. The pain is usually worse at night. The patients may have only backache.

They sometimes get relief by standing, which is uncommon in disk syndrome, with which the patient likes to lie down. Here with block you have localized the tumor between two needle punctures and . . . a tumor becomes visible in the operative field. *(To nurse)* Here, get a frozen section biopsy.

PATHOLOGIST: *(A few minutes later)* Edematous degenerating hemorrhagic ependymoma.

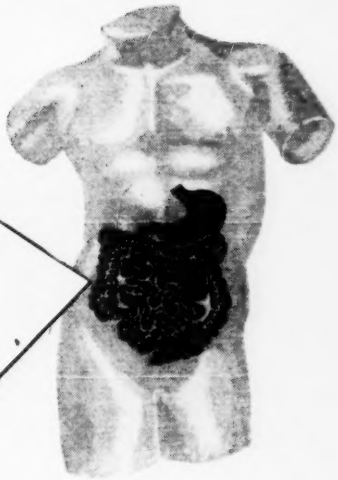
NEUROSURGEON: It is a huge tumor, completely surrounding the cauda equina.

VISITING M.D: *(To amphitheater students and residents)* Every suspected case of protruded intravertebral disk should have, in addition to a physical examination, orthopedic and neurologic examination, roentgenograms over the appropriate part of the spine, and, when surgery is considered, a spinal fluid examination and visualization with contrast media. Often before surgery is really contemplated, a spinal fluid examination is in order. In this case we cannot remove the entire tumor. Yet there were no neurologic findings, only an astronomically high spinal fluid protein, which was probably high for a long time. Early diagnosis may mean the difference between removal and inability to remove intraspinal tumors.

HALEY'S

M-O

Antacid
Laxative
Lubricant



HALEY'S M-O is a homogenous, pleasant-tasting emulsion combining the antacid and laxative properties of Phillips' Milk of Magnesia with the lubricating action of Pure Mineral Oil.

As an antacid, Haley's M-O brings fast relief from the symptoms of gastric hyperacidity.

As a laxative, the minute oil globules are thoroughly distributed and mixed with the intestinal contents . . . resulting in gentle, demulcent and thorough evacuations without leakage.

Haley's M-O is especially desirable for bowel irregularities associated with pregnancy and hemorrhoidal conditions.

DOSAGE: 1 to 2 tablespoonfuls before retiring.

THE CHAS. H. PHILLIPS CO. DIVISION
of Sterling Drug Inc.
1450 Broadway, New York 18, N. Y.

What are the facts about

Isoniazid for Schizophrenia?

Studies now under way may give an answer

HAS a successful drug treatment been developed for schizophrenia?

An answer in the affirmative was suggested by newspaper and magazine articles last fall. The stories recounted employment of isonicotinic acid hydrazide with some success at a Minnesota state mental hospital.

Apparently the wish was father to the thought. No such report has appeared in the medical literature. The stories in the lay press were based upon information that scientific trials were contemplated to determine whether the drug might be effective in treatment of mental disease.

When isonicotinic acid hydrazide (isoniazid) first gave promise of benefiting patients with tuberculosis, supplies were distributed to many tuberculosis hospitals for testing. One such supply went to the Minnesota state mental hospital at Anoka, near Minneapolis. This hospital includes a unit for treatment of tuberculosis of the mentally ill.

A study of the toxicity of isoniazid began there in March 1952. Forty-eight patients with tuberculosis (exclusive of those few who were dropped), men and women from 23 to 76 years old, all diagnosed schizophrenics and almost all typical patients who, for many years, had received routine attention at an understaffed state mental hospital were given for this study 4 mg. a day of isoniazid per kilogram of body weight.

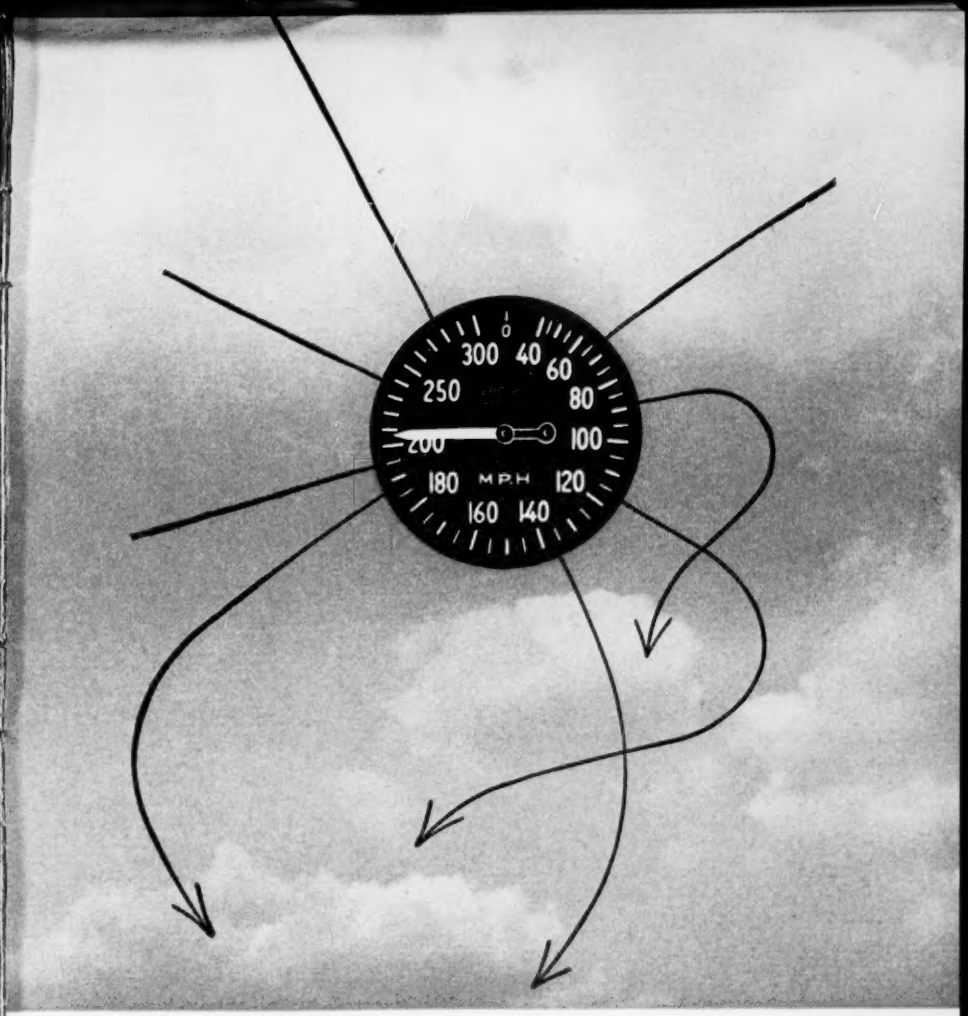
Within two or three weeks, ward nurses and psychiatric aides began to notice many behavior changes. Their patients were behaving differently, they reported. Many seemed improved mentally. Men and women extremely withdrawn and negative for years became more approachable and aware of things around them.

A woman, 37, committed as a schizophrenic in 1932 and long shut off from the world except for spells of violence, began to converse pleasantly and do some reading. Another woman, 43, had been deeply withdrawn and curled up in her bed in a fetal position. She began to leave her bed daily, read newspapers, and chat rationally.

A man, 34, committed when he was 16, became cheerful and cooperative after years marked by daily periods of destructiveness during which he "put his hand through windowpanes and smashed medicine glasses on the floor."

Of the 48 patients, 30 showed "continued improvement in general behavior, cooperativeness and activity" after ninety days. Thirteen stayed unchanged and 3 became somewhat more disturbed. Those who showed what was called definite improvement at this point

(Continued on page 162)



Air velocity—200 miles per hour

In coughing, the expulsive air speed often irritates mucosal tissue and induces more coughing. Phenergan Expectorant is valuable in arresting this vicious cycle. It relieves local irritation on contact . . . combats any existing allergic component of cough . . . when prescribed for night cough, promotes uninterrupted, restful sleep.

At your option:
with or without codeine

PHENERGAN®
EXPECTORANT

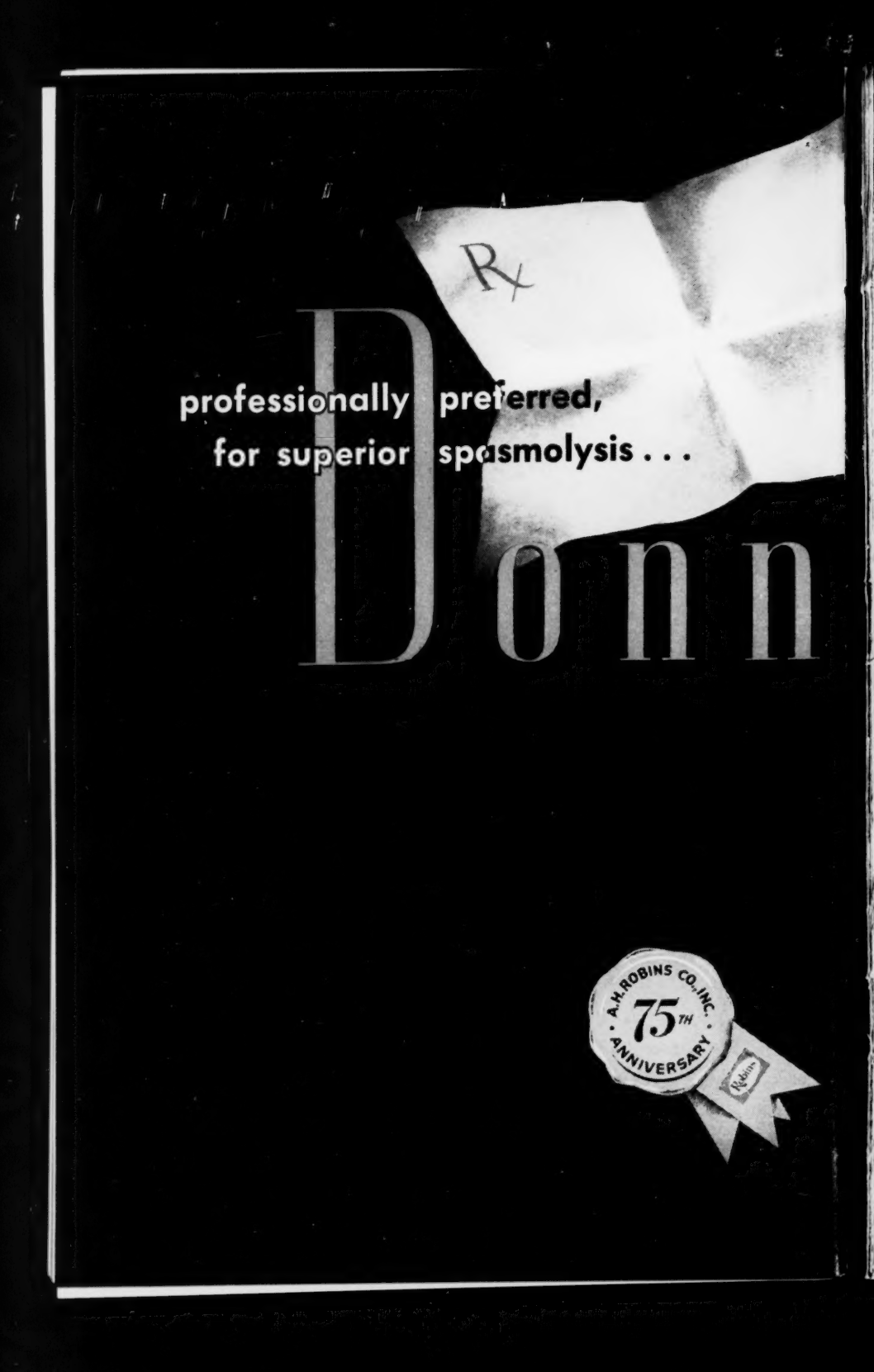
PROMETHAZINE EXPECTORANT

WITH CODEINE* **PLAIN (without codeine)**

SUPPLIED:
Bottles of 1 pint

*Exempt Narcotic

Wyeth®
Philadelphia 2, Pa.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professionally preferred,
for superior spasmolysis . . .
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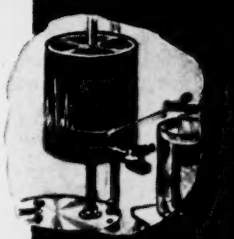
Robins

Employs natural belladonna alkaloids, in optimum standardized proportions,* for relief of gastro-intestinal, urinary, biliary or uterine spasm. Prescribed by more physicians than any other spasmolytic.

Each Donnatal Tablet, Capsule, or 5 cc. of Elixir contains hyoscyamine sulfate 0.1037 mg., atropine sulfate 0.0194 mg., hyoscine hydrobromide 0.0065 mg., phenobarbital (¼ gr.) 16.2 mg. The formula is now available with the essential B-vitamins added, as DONNATAL PLUS tablets.



A. H. ROBINS CO., INC. · RICHMOND 20, VA.

Ethical Pharmaceuticals of Merit since 1878

were in the main younger patients, the average age being 27.

Results in tuberculosis with isoniazid alone were not notable. Some patients, in fact, improved mentally while their tuberculosis got worse.

Dr. Albert E. Krieser, head of tuberculosis control in the Minnesota state division of public institutions, made regular reports on all these effects, as required of him, to the pharmaceutical firm that supplied the drug.

In August the newspaper story broke. Writers quoted the firm's statements that the drug was "strikingly effective" in schizophrenia. Krieser himself pointed out, however, that the drug had not yet been proved a cure and that no patient had been released. The medical director of the pharmaceutical firm made a similar statement.

Actually, as qualified research men know, it is impossible to say at this point what really accounted for the Anoka observations and whether the drug alone had really been effective at all—let alone how long any effects would last.

Sometimes psychiatric patients show sudden changes in behavior for little or no apparent reason. Sometimes they improve with any kind of increased attention, and this may be particularly true of long-neglected state mental hospital patients.

In tuberculosis sanatoriums, moreover, doctors have frequently been observing euphoria in isoniazid patients. Finally, these Anoka patients received no detailed psychiatric or psychologic evaluation.

On the other hand, many of these patients had received previous courses of streptomycin and PAS. with the attention that went along with such dosage, and had showed no mental improvement. Doctors working with these Anoka isoniazid patients were convinced that something was happening.

Clearly a formal scientific trial was indicated—even should the drug at best prove to provide only a period of lucidity during which conventional psychiatric treatment could start. Such a trial was planned at Anoka by Dr. Edmund W. Miller, superintendent, who died in July. Personnel changes since have prevented the trial.

But some studies have started elsewhere. A sixteen-week study of iproniazid—1-isonicotinyl-2-isopropyl hydrazine, the isopropyl derivative of isoniazid—began in August at the Fergus Falls, Minn., state mental hospital with schizophrenics, and in this case the schizophrenia was uncomplicated by tuberculosis or any other serious disease. All the subjects are regressed or deeply sunken schizophrenics, patients hospitalized five years or longer; 25 are getting iproniazid, 25 placebos, and 25 no drug at all.

Psychologists are watching the patients and scoring their behavior changes on a formal rating scale. Results will not be announced until the physicians in charge have observed the patients long enough to give valid conclusions.

BASIC SCIENCE *Briefs*

Atherosclerosis

Induced Hypercholesterolemia

Hypothyroid rats with severe hypercholesterolemia are resistant to atherosclerosis. When hypothyroid rats are given food conducive in other animals to atherosclerosis, severe hypercholesterolemia results. Accompanying the blood changes are fatty livers twice normal size, and heavy lipid infiltration of the kidneys, heart, and aorta, but no formation of foam cells or intimal proliferation, and no atherosclerosis. Drs. Irvine H. Page and Helen B. Brown of the Cleveland Clinic Foundation, Cleveland, believe that the resistance to atherosclerosis in rats is dependent upon lack of tissue response to the infiltrating lipid.

Circulation 6:681-687, 1952.

"My wife's insomnia is killing me."

Gastroenterology

Vagotomy and Colon Function

Functional and anatomic division between the sympathetic and the parasympathetic systems is not complete. Apparently, the effects of the vagus and sympathetic nerves are not antagonistic but supplement each other in controlling gastrointestinal activity. Temporary imbalance after section of either the vagi or the splanchnics alters the motility of the gut and the vasomotor state, producing local ischemia, necrosis, and erosions. Observations were made through a transverse colostomy of a 21-year-old woman who had bilateral vagotomy and previously had had a left hemicolectomy because of ulcerative colitis. Immediately after vagotomy, a temporary pallor and hypomobility of the colon were noted, with return to almost the preoperative stage in six weeks. The response to naturally occurring and experimentally induced emotional states was similar to that obtained preoperatively, but the degree of vascular reaction of the mucosa was reduced. Dr. J. Wener and associates of McGill University and Royal Victoria Hospital, Montreal, believe that in this patient part of the parasympathetic innervation of the transverse segment was derived from the vagus nerves.

Gastroenterology 22:250-256, 1952.

short REPORTS

Cancer

Save Survey Films

To aid early detection of lung cancer, all chest roentgenograms made of adults during tuberculosis surveys or for other reasons should be preserved and readily available. Such films are invaluable for comparison of minor changes when later roentgenograms reveal lesions likely to be cancer. Dr. Leo G. Rigler of the University of Minnesota, Minneapolis, urges all Public Health Services, hospitals, industrial plants, and others to save chest films for future use.

Hormones

ACTH and Myasthenia Gravis

Decreased strength and lessened response to neostigmine may accompany or follow the administration of ACTH or cortisone to patients with myasthenia gravis. In 10 persons given from 40 to 112 mg. of ACTH intramuscularly for as long as eleven days, and 3 administered 150 to 200 mg. of cortisone for up to twelve days, Drs. David Grob and A. McGehee Harvey of Johns Hopkins University, Baltimore, found a reduction of circulating eosinophils, in most instances to zero. Urinary excretion of 17-ketosteroids and 11-oxysteroids was increased in 2 subjects who were tested. The occasional development of generalized muscular weakness during prolonged hormone therapy in nonmyasthenic persons may or may not be associated with depression of the serum concentration of potassium, but the exacerbation of myasthenia gravis was not accompanied by depletion of potassium or ameliorated by administration of potassium chloride. Since onset of the disease is rare in females over 60 years of age, occurrence of the condition after eight months of cortisone therapy in a 65-year-old woman who had had crippling rheumatoid arthritis since the age of 25 may be related to the previously observed influence on the disorder of physiologic changes effected by altered endocrine function.

Bull. Johns Hopkins Hosp. 91:124-136, 1952.

New Devices

Reading Pencil for Blind

A light source capable of scanning each character on a page in five or more zones is the basic element of a new reading pencil for the blind. The reflections, different for each symbol, are picked up by a photoelectric tube and translated into voltage groups which activate recordings of the sounds of each letter. The device spells out the book. The inventors are Drs. Vladimir K. Zworykin and Leslie E. Flory of Princeton, N. J.

PIONEERING

the first true Hematopoietic stimulant

RONCOVITE

Specific Bone Marrow Stimulation in Anemia

Medical research has recently proved that full therapeutic doses of cobalt exert a consistent and pronounced hematopoietic effect on bone marrow—a property which has not been demonstrated by any other compound.

Roncovite, the pioneer cobalt-iron preparation, has a remarkably rapid stimulating effect on the human blood producing mechanism. Because of this action, Roncovite opens an entirely new field in the therapy of human anemia.

The mechanism of the "cobalt effect" has been shown to differ completely from the "catalytic" effect of trace elements and from that of vitamin B_{12}.

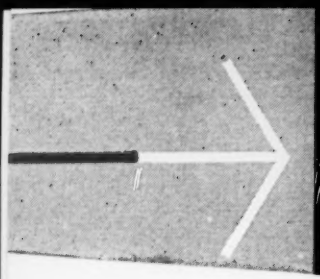
HEMATOPOIETIC EFFECT OF COBALT

Effect on Erythrogenesis and Hemoglobin

Pharmacologically, it is now well established that cobalt administration causes a rapid and striking hematopoietic response. An initial increase in reticulocytes is promptly followed by pronounced increases in the red cell count and in hemoglobin. [1,2,6,7,17,18,19,20,25] The bone marrow undergoes progressive hyperplasia of all cellular elements[13] and shows increased numbers of erythrocyte precursors.[8,9]

In experimentally induced anemia, cobalt accelerates recovery from hemorrhage,[8] overcomes the hemopoietic depression due to inflammation[10] and is superior to iron, copper-iron, liver extract or vitamin B_{12} in preventing the anemia produced by hypophysectomy.[24]

See next page for clinical results



IONEERING . .
THE FIRST TRUE

Clinical Results

Early reports on the use of cobalt in the treatment of human anemia have been extended and clarified by recent clinical investigations.

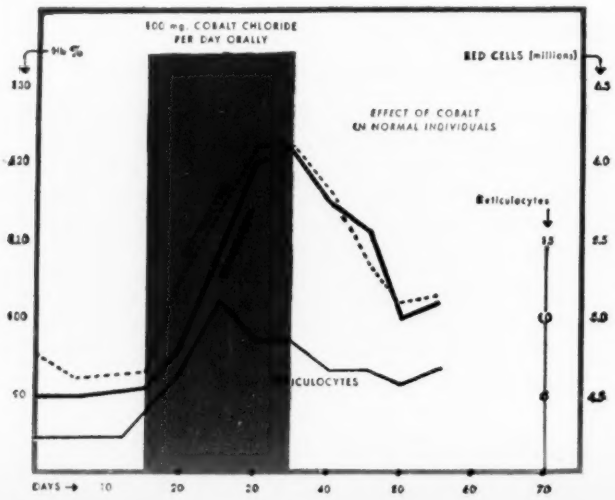
In anemic infants and children a definite pattern of response follows Roncovite therapy with increases in erythrocytes and hemoglobin levels. An average weekly gain of 250,000 erythrocytes and 0.6-0.7 Gm. of hemoglobin has been reported,[13,27] despite the fact that many of the children so treated had failed to respond to iron.

Striking results likewise have been reported in adult secondary anemia.[16,23,25]

As one investigator[17] *summarizes:*

—the anti-anemia effect of cobalt can be expected in anemias where the bone marrow is capable of regenerative action. In such cases the hematopoietic effect is even greater than in the normal individual and is proportional to the severity of the anemia.

Marked erythrocyte increases, often of 50% or more of the initial value, are noted. In addition, if adequate iron reserves are present, parallel increases in hemoglobin are characteristic.



. . . RONCOVITE

HEMACOPOIETIC STIMULANT

Roncovite (Cobalt and Iron) **For Full Effect**

The erythropoietic effect of cobalt does not depend on the presence of iron, since cobalt administration alone will cause erythrogenesis even in the presence of iron deficiency and may lead, in this way, to a hypochromia.[19] Since iron is necessary for hemoglobin synthesis, Roncovite provides ferrous sulfate to insure adequate iron reserves and thus permits hemoglobin increases to accompany erythrogenesis under the influence of cobalt.

Clinical Applications of Roncovite

Cobalt therapy has given excellent results in secondary anemia accompanying chronic inflammatory diseases, infections, tuberculosis, chronic hemorrhage, pregnancy, iron deficiency anemia, idiopathic hypochromic anemia, erythrogenic hypoplastic and hypochromic microcytic anemia.

Dosage

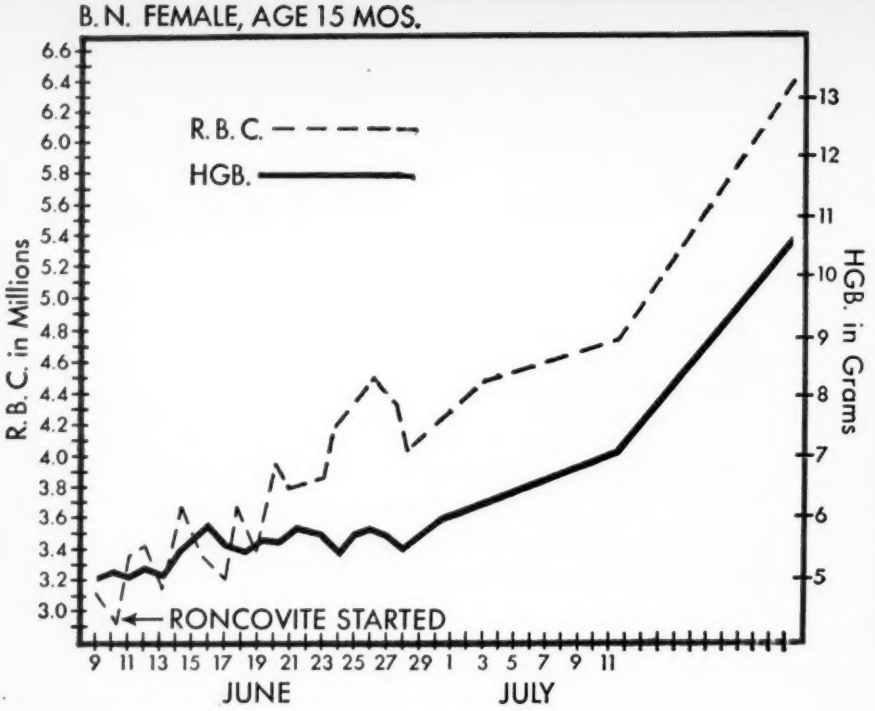
The recommended daily dose of 4 Roncovite Tablets provides 60 mg. cobalt chloride.

The recommended daily dose of 0.6 cc. of Roncovite Drops provides 40 mg. cobalt chloride.

Both preparations provide, in addition, the necessary iron to maintain adequate iron reserve.

Daily oral doses of 60 mg. of cobalt chloride in adults, or 40 mg. in children and infants, have been shown to be effective hematopoietic stimulants, and are well tolerated. These doses may be increased if desired. Gastrointestinal side-effects, as evidenced by anorexia or nausea, are rare at the recommended dosage levels. The appearance of such side effects at higher dosage levels are an indication for reduction of the dose.

How To Prescribe Roncovite (next page)



Preparations Available

RONCOVITE TABLETS

Each Enteric Coated, Red tablet contains:
Cobalt chloride.....15 mg.
(Cobalt as Co.....3.7 mg.)
Ferrous sulfate, exsiccated.....0.2 Gm.
(Iron as Fe.....60 mg.)

Average Adult Dosage: 1 tablet after each meal and at bedtime.

Supplied: bottles of 100 tablets.

RONCOVITE DROPS

Each 0.6 cc. contains:
Cobalt chloride.....40 mg.
(Cobalt.....9.9 mg.)
Ferrous sulfate.....75 mg.
(Iron.....15.1 mg.)

Average Dose: 0.6 cc. (10 minims) diluted with water, milk, fruit or vegetable juice once daily to infants and children.

Supplied: bottles of 15cc. with calibrated dropper.

Complete bibliography supplied on request.

LLOYD BROTHERS, INC. Cincinnati 3, Ohio

Meetings

Fertility, Sterility Congress

The First World Congress on Fertility and Sterility will be held May 25-31, 1953 at the Henry Hudson Hotel in New York City. Sponsor is the International Fertility Association with the cooperation of the American Society for the Study of Sterility. The sessions will be conducted in English, French, and Spanish, with the use of earphones and simultaneous translations, as in the United Nations meetings. About 1,800 scientists from 51 countries are expected to attend. Seat reservations may be made with the Chairman of the Local Arrangements Committee, 1160 Fifth Avenue, New York 29, N. Y.

Neurosurgery

Bladder Denervation in Paraplegics

Posterior rhizotomy may benefit patients with lesions of the cervical or upper thoracic spinal cord whose lives are endangered by paroxysmal hypertension precipitated by stimuli to the skin and hollow viscera. Episodes of hypertension in such patients caused by instrumentation of the urinary tract, digitation of the rectum, or handling the genitals may be prevented by topical anesthesia. Reflex hypertension from physiologic filling of the bladder may, however, be permanently abolished by posterior rhizotomy. Drs. Ernest Bors and John D. French of the Veterans Administration Hospital, Long Beach, and the University of California, Los Angeles, find that bilateral interruption of the afferent pathways below the ninth, tenth, and eleventh thoracic segments prevents most bladder impulses from reaching the cord. Postoperative relief from hypertension and resultant headaches was achieved for 6 of 7 paraplegic patients. The other had less pronounced improvement but no longer had spontaneous attacks of hypertension. Over-all reduction of cutis anserina, perspiration, erections, and skeletal spasticity was noted in all the patients. Bladder function remained unchanged. Posterior rhizotomy should be reserved for patients not having satisfactory spontaneous improvement of autonomic spasticity.

Arch. Surg. 64:803-812, 1952.

"Steiglitz finally managed to isolate the cold germ."

Surgery

Obstructed Colon

Aseptic cecostomy is possible with an obstructed and dilated colon if a trocar sheathed in a rectal tube is used for decompression. A suction trocar is inserted into the well-oiled lumen of a No. 30 rectal tube. The piercing end of the trocar protrudes slightly through an opening cut in the tip of the tube. Trocar and tube are thrust into the exposed cecum. Rapid deflation permits easy placement of 2 purse-string sutures which are tied about the rectal tube after partial withdrawal of the trocar. The catheter is then clamped off and the trocar removed. The collapsed cecum is drawn out, sutured to the skin surface, and the wound closed. Lavage of the colon is started immediately. Dr. J. Murray Beardsley of the Rhode Island Hospital, Providence, considers an exteriorized cecostomy preferable to transverse colostomy in most patients. Closure of a cecostomy is relatively simple, but a transverse colostomy often requires resection and anastomosis to avoid narrowing of the colon. Location of the cecostomy is satisfactory and, with exteriorization, cleansing is simple. If fecal material is not freely eliminated, the cecal stoma should be enlarged after removal of the rectal tube.

Am. J. Surg. 84:236-237, 1952.

Cardiology

Television Attacks

Watching wrestling matches over television seems to excite angina pectoris episodes in quite a few patients, observes Dr. Hyman Engleberg of Los Angeles.

Am. J. M. Sc. 224:490, 1952.

Cardiology

Ballistoscope for Bedside

Cardiac impulses typical of various types of heart disease are registered in a two-dimensional plane by the ballistoscope, but only in a longitudinal direction by the ballistocardiograph. A bedside instrument described by Dr. Samuel Losner of the Jewish Sanitarium and Hospital for Chronic Diseases, Brooklyn, comprises a receptacle 1.5 mm. thick, 3.75 cm. wide, and 5 cm. high, containing commercial heavy oil No. 40, soldered to a heavy brass base 2.5 cm. tall and 6.25 cm. across. A 20-cm. aluminum rod fastened to the base is topped by an otoscope bulb connected with a transformer or two dry cells supplying a current of 2.5 volts. The device is so placed on the patient's sternum or back or on a bar across the legs that the fluid level is horizontal. A camera photographs the reflection of the ballistoscopic flash on the liquid with a 0.5-second exposure. The heaviness of the mirror-like medium represses respiratory movements but transmits cardiac waves.

Proc. Soc. Exper. Biol. & Med. 81:1-3, 1952.

"Forget to shake your medicine again?"

Antibiotics

Penicillin and Coagulation

Crystalline penicillin has no effect on blood coagulation. From in vitro and in vivo experiments, Drs. Demos C. Triantaphyllopoulos and Burton A. Waisbren of Milwaukee County General Hospital and Marquette University, Milwaukee, find that the drug does not affect prothrombin consumption, labile factor, thrombin, or protamine titration. Changes previously ascribed to penicillin were probably caused by impurities in early preparations of the antibiotic.

Arch. Int. Med. 90:653-659, 1952.

Surgery

Lung Grafts

Homologous transplantation of a whole lung may become possible through improvements in surgical technic. Dogs have survived for as long as eight days after lung transplantation, report Dr. Harry A. Davis and associates of the College of Medical Evangelists, Los Angeles. The operation consists of exposure of the main bronchus, pulmonary artery, inferior and superior pulmonary veins, and interruption and careful anastomosis in the recipient animal. Healing of bronchial and circulatory anastomoses proceeds satisfactorily, considering the rather prolonged ischemia endured by the donor lung. Despite complete denervation of the transplanted lung, respiratory excursions are synchronous, although somewhat reduced on the transplant side. Respiration was characterized by periods of deep and rapid breathing, interrupted by paroxysms of dyspnea. In all cases death could be ascribed to errors in surgical technic, such as leaky anastomoses and heparin overdosage. Antigen–antibody induced structural changes in the lung graft are difficult to evaluate at this time.

Arch. Surg. 64:745-751, 1952.

Toxicology

Vitamin B_{12a} and Cyanide

Poisoning from cyanide is effectively counteracted in mice by vitamin B_{12a} but not by vitamin B_{12}. The addition of cyanide ions to a solution of vitamin B_{12a}, hydroxocobalamin, results in the irreversible binding of one cyano group to a cobalt atom to form vitamin B_{12}, cyano-cobalamin. Following these observations, Dr. Charles W. Mushett and associates of Rahway, N. J., find that pretreatment of mice with 50 or 250 mg. per kilogram of vitamin B_{12a} adequately protects against doses of 5.5 to 8 mg. per kilogram of potassium cyanide, but administration of 25 mg. per kilogram does not. Intravenous injection into mice of 250 mg. per kilogram of vitamin B_{12a} given within one or two minutes or 100 mg. per kilogram within one minute after intraperitoneal administration of an otherwise lethal amount of the cyanide, 10 mg. per kilogram, relieves the respiratory distress and convulsions immediately and prevents death.

Proc. Soc. Exper. Biol. & Med. 81:234-237, 1952.

Koagamin Controls Post-Tonsillectomy Bleeding

Spontaneous or postoperative bleeding may be controlled with KOAGAMIN easily and quickly.[1] It has been found especially effective in post-tonsillectomy bleeding for its double action – decreasing coagulation time,[2] and increasing clot resistance even in hemophiliacs.[3]

KOAGAMIN'S direct action on the blood and tissue fluids renders it more useful than vitamin K, effective only when blood prothrombin is low. In such cases, KOAGAMIN is recommended in conjunction with slower-acting vitamin K to effect faster control.

KOAGAMIN

An aqueous solution of oxalic and malonic acids for parenteral use
in 10 cc. diaphragm stoppered vials
Descriptive literature and comprehensive dosage chart upon request.

THERAPEUTICALLY aids control of bleeding gastric and duodenal ulcers, hematemesis, hematuria, uterine bleeding, the dyscrasias, etc.

PREOPERATIVELY minimizes oozing, assures a clearer surgical field.

POSTOPERATIVELY controls secondary bleeding.

1. Hollender, A. R.: Office Treatment of Nose, Throat and Ear, 1943 Year Book Publishers, Chicago, p. 200.
2. Martin, G. J.: Am. Jl. Physiol. 130:574, 1940.
3. Copley, A. L. and Lalich, J. J.: Am. Jl. Med. Sci. 204:665, 1942.

Chatham

Available Through Your Physician's Supply House or Pharmacist

CHATHAM PHARMACEUTICALS, INC. NEWARK 2, NEW JERSEY, U.S.A.

Nellie Nifty, R.N.

by kaz

Commenting on his remarkable results in 22 previously resistant cases of acne, Nierman[1] states: "Kutapressin apparently constricts the cutaneous blood vessels, improving the blood flow in the acne lesion and decreasing the congestion of blood and tissue fluid in the papule . . .". Pustules and other lesions disappeared or were greatly improved; scars and pits, usually amenable only to surgery, responded with marked changes in size and structure.

Other investigators have found **KUTAPRESSIN*** effective in keloids[2,3] and in pruritus ani.[2]

SUPPLIED: In 10-cc. multiple-dose vials; for subcutaneous or intramuscular administration.

KUTAPRESSIN

Trademark

DEFEATS ACNE *

FROM WITHIN

CUTANEOUS VASOCONSTRICTING PRINCIPLE FROM LIVER

1. Nierman, M. M.: J. Indiana M. A. 45:497, 1952.
2. Marshall, W.: M. Times 79:222, 1951.
3. Marshall, W., and Schadeberg, W.: Wisconsin M. J. 49:369, 1950

KREMERS-URBAN COMPANY
Ethical Pharmaceuticals Since 1894
Laboratories in Milwaukee

*Trademark of Kremers-Urban Co.

NOW a really effective treatment

for Seborrheic Dermatitis of the scalp

...keeps scalp free of scales for one to four weeks

In clinical trials with 400 patients[1,2,3] SELSUN Sulfide Suspension provided *complete control* in 81 to 87 percent of all cases of seborrheic dermatitis . . . and in 92 to 95 percent of cases of mild seborrhea (common dandruff). SELSUN frequently proved successful after other recognized treatments had failed to produce satisfactory results. These studies showed that SELSUN stops itching and burning symptoms after only two or three applications . . . and that scaling is controlled for one to four weeks.

Patients find SELSUN simple and pleasant to use . . . it is applied while washing the hair, then rinsed out. As a result, the scalp is left clean and odorless, and there is no oily residue to come off on clothing or linens. Toxicity studies[1,2] show there are no harmful effects when used externally as recommended.

Designed strictly for the medical profession, SELSUN is available *only on a physician's prescription.* It is supplied by pharmacies in 4-fluidounce bottles with tear-off labels. Abbott

References:

1. Slinger, W. N., and Hubbard, D. M. (1951), Arch. Dermat. & Syph., 64:41, July.
2. Slepyan, A. H. (1952), Ibid., 65:228, February.
3. Ruch, D. M. (1951), Communication to Abbott Laboratories.

PRESCRIBE **SELSUN**

TRADE MARK

SULFIDE *Suspension*

(SELENIUM SULFIDE, ABBOTT)

A

1 *Before treatment with Selsun*

CLINICAL PHOTOGRAPHS showing effect of SELSUN on pityriasis sicca

2 *After two weeks of treatment*

Patient applied SELSUN twice a week for two weeks, once a week for next four weeks

3 *After six weeks of treatment*

Doctor to Doctor

Think of a gag that fits the illustration. For every issue a new gag is published and the author is sent $5. The Feb. 1 winner is

V. F. Goutero, M.D.
Sacto, California

Mail your caption to
The Cartoon Editor
Caption Contest
No. 2
MODERN MEDICINE
84 South 10th St.
Minneapolis 3, Minn.

"Of course you'll be a success: bald for the look of intelligence and piles for the look of concern."

NEW DRILOZETS*

antibiotic-anesthetic **LOZENGES for**

SORE THROAT

associated with coughs or colds and for other minor infections of the throat and mouth

S.K.F. now presents 'Drilozets', new, pleasant-tasting lozenges to combat infection and relieve discomfort in the throat and mouth. 'Drilozets' contain the same antibiotics used in S.K.F.'s widely prescribed intranasal preparation: Drilitol†.

'Drilozets' work in two ways:

1. Double antibiotic action: **'Drilozets' contain anti-gram-positive gramicidin and anti-gram-negative polymyxin to prevent or attack bacterial infections.**

2. Soothing anesthetic action: **'Drilozets' contain the remarkable new topical anesthetic Quotane‡, to soothe inflamed mucosa.**

With 'Drilozets', you minimize the danger of sensitizing the patient to penicillin or the "mycins", which are so frequently used systemically in serious infections.

Available on prescription only.

Smith, Kline & French Laboratories, Philadelphia

* Trademark †T.M. Reg. U.S. Pat. Off.

‡T. M. Reg. U. S. Pat. Off. for dimethisoquin hydrochloride, S.K.F.

Circulation

Lipotropics and Arteriosclerosis

Inositol in massive doses has little value in the treatment or prophylaxis of arteriosclerosis induced in rabbits by epinephrine-thyroxine injections. Severe nonatheromatous sclerosis affects the media and intima of 90% of such animals. However, Drs. Oscar Davis and Y. T. Oester of Loyola University, Chicago, find the incidence of the condition reduced to 66% by concomitant administration of 50 mg. of ascorbic acid daily. The severity of the lesions is also lessened. Incidence drops to 61 or 55% with 100 or 500 mg. of the acid, respectively. Hormonal imbalances may induce a prelipid shock phase of atherosclerosis, injuring the arterial wall and predisposing to the subsequent abnormal deposits secondary to dysfunction of lipid metabolism.

Proc. Soc. Exper. Biol. & Med. 81:284-286, 1952.

"You may come right in, sir."

An Invitation to All Doctors

REVIEW COURSES IN BASIC and CLINICAL NEUROLOGY

April 6-7-8, 1953

Preceding the 1953 meeting of American Academy of Neurology Chicago, Illinois

---

Neuropathology—April 6, 1953
Fees: Juniors: $20.00; Fellows, Actives and Associates: $30.00; Non-members: $40.00

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Fees: Juniors: $10.00; Fellows, Actives and Associates: $15.00; Non-members: $20.00

Brain Tumors—April 8, 1953
Fees: Juniors: $15.00; Fellows, Actives and Associates: $25.00; Non-members: $35.00

Neurological Anatomy—April 8, 1953
Fees: Juniors: $10.00; Fellows, Actives and Associates: $15.00; Non-members: $20.00

Enrollment for all courses is limited.

Priority will be determined by date of application.

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CHICKEN POX

TABES DORSALIS

HERPES ZOSTER

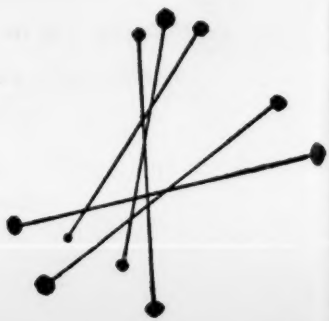
NEURITIS

PROTAMIDE

(SHERMAN)

FOR THERAPEUTIC MANAGEMENT OF

NERVE ROOT PAIN



In the Treatment of

NEURITIS

(Sciatic—Intercostal—Facial)

"...patients responded with complete relief of pain"*

WITH PROTAMIDE

Richard T. Smith, M.D., in a currently published paper, "Treatment of Neuritis with Protamide" reports: 84 patients of 104 had complete relief of pain in sciatic, intercostal and facial neuritis with one daily injection of Protamide for five or ten days. "... 49 were discharged as cured after five days of therapy." No intolerance to Protamide, systemic or local was found in the 125 patients (104 plus 21 controls). Two qualifications for practical application of this study are:

1. *The elimination of cases due to mechanical pressure.*
2. *Early treatment after onset.*

Your prescription blank marked NEURITIS REPRINT will bring literature.

SHERMAN LABORATORIES
BIOLOGICALS • PHARMACEUTICALS
WINDSOR DETROIT 15, MICH. LOS ANGELES

Our Office Nurse

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Bismarck, N. D.

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Caption Contest
No. 3

MODERN MEDICINE
84 South 10th St.
Minneapolis 3, Minn.

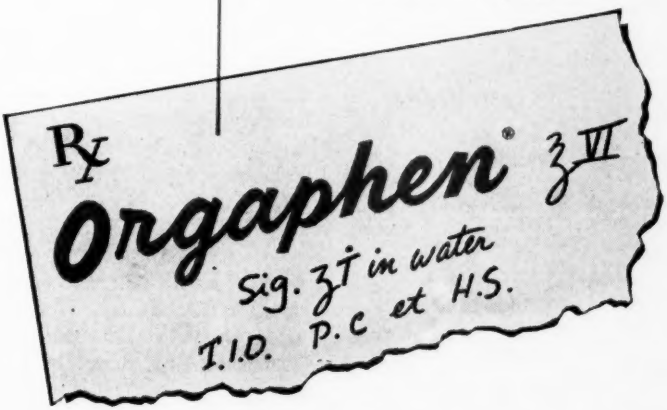
"When you sign my name spell it 'Sigmund,' not 'Sigmoid.'"

---

in hypertension...

FIRST: ***Relieve the tension... Raise the spirit***

THEN: *Lower the Blood Pressure... ease the Symptoms*



Relief of the subjective symptoms accompanying high blood pressure may completely rehabilitate a hypertensive patient. Whereas, *mere lowering of blood pressure without relief of symptoms*, serves no such purpose.

The patient receiving ORGAPHEN WAMPOLE experiences relief of the disturbing subjective symptoms. A fall in blood pressure usually follows this subjective improvement.

ORGAPHEN WAMPOLE, the unique elixir of *organically bound iodine* and phenobarbital, has become a useful tool in the management of hypertension.

Each 4 cc. (teaspoonful) contains:

ORGANIDIN® Solution (organically combined iodine)	10 minims
PHENOBARBITAL	⅓ grain

The low effective dose of the small quantity of phenobarbital in ORGAPHEN is *potentiated* by the *synergistic* action of ORGANIDIN. The *smaller* dose of phenobarbital tends to preclude neuroses frequently resulting from the larger doses more commonly employed.

Supplied in 16-oz. bottles.
Samples and literature on request.

HENRY K. WAMPOLE & CO. • PHILADELPHIA 23, PA.
INCORPORATED

Am. J. Med. 4:875, 1948. Slaughter, Donald; Grover, Wm. C., and Hawkins, Richard. Report to American Therapeutic Society, Boston, 1950.

Geriatrics

Hypovitaminemia A

Oral administration of the natural vitamin A acetate may ameliorate the ocular and skin manifestations of hypovitaminemia A in the aged. In 23 elderly individuals whose blood plasma concentrations had a mean value of 7.2 μg. per 100 cc., Drs. John Esben Kirk and Margaret Chieffi of Washington University, St. Louis, obtained an increase to 44.5 μg. by a daily dosage of 30,000 units of natural vitamin A acetate. The routine diet of the patients provided 10,000 units a day. When treatment was discontinued after one year, a level of about 16 μg. was quickly reached and maintained. The localized conjunctival thickening, blepharoconjunctivitis, and toad skin were definitely but slowly benefited. The dark adaptation time was not significantly influenced in 13 of 17 patients, but was greatly decreased in 4.

J. Clin. Nutrition 1:37-43, 1952.

"My wife's sick. Could we borrow a medical book, Doctor?"

Cardiology

Heparin and Atherosclerosis

Incidence of anginal attacks in many patients with severe coronary atherosclerosis is reduced by heparin therapy when previous treatment has been unavailing. Dr. Hyman Engelberg of Los Angeles says that no dangerous reactions resulted among 29 patients administered heparin, and 55% had fewer anginal attacks. The angina is often decreased and of shorter duration. Best results are obtained with 100-mg. doses given twice weekly intravenously. Exercise electrocardiograms and ballistocardiograms give objective evidence of heparin's beneficial effects, which are probably not the result of anticoagulant or vasodilator action. Heparin is a physiologic substance with a profound effect on the plasma lipoproteins.

Am. J. M. Sc. 224:487-495, 1952.

"Keep your shirt off. I'll be right back."

Unlike other widely employed nasal vasoconstrictors, ARAMINE *may be relied upon to relieve nasal congestion before retiring or during the night. Since* ARAMINE *apparently does not stimulate the central nervous system, it should not interfere with sleep.*

Latest Development in Intra-Nasal Therapy

Compare 'ARAMINE' with other nasal decongestants			
Attribute	'ARAMINE'	EPHEDRINE	COMPOUND A
Duration	Moderate	Moderate	Protracted
Nasal damage from prolonged use	No	Occasionally	Occasionally
Irritation (stinging)	Virtually none	Yes	Virtually none
Secondary engorgement	Virtually none	Occasionally	In some patients
Excitation or insomnia	No	Yes	No
Palpitation	No	Occasionally	?
Inhibition of ciliary motility	Mild	Marked	Mild

Gentle-acting ARAMINE *may be administered safely to patients of all ages. Its use effectively shrinks engorged mucosa, permitting easier and more normal breathing, and facilitates drainage of excess fluids and debris.*

A development of the Sharp & Dohme Medical and Research Divisions, ARAMINE *is the first new nasal vasoconstrictor of any consequence to be introduced to the medical profession in more than a decade*

ARAMINE IS AN EXCEPTIONALLY EFFECTIVE, GENTLE-ACTING NASAL DECONGESTANT

Many nasal decongestants currently being used may actually aggravate symptoms—due to an inherent vasodilating component, or because their vasoconstrictor action is so potent that the initial shock to the nasal mucosa results in secondary engorgement, or "rebound" swelling.

ARAMINE appears to have no vasodilating component, and its vasoconstrictor action is not so intense or prolonged as to irritate or damage the sensitive nasal mucosa.

ARAMINE acts rapidly, but *gently;* it possesses a moderate duration of action. It has no apparent stimulant effect on the central nervous system, and does not appreciably interfere with normal ciliary activity.

The MIJIT *atomizer-dropper may be easily carried in the pocket or handbag, to be used inconspicuously, as an atomizer or dropper, at home or at work.*

is Applied with Unique New Atomizer-Dropper

SHARP & DOHME

Aramine®

BITARTRATE

ARAMINE is supplied as an isotonic solution of ARAMINE *bitartrate, (0.25%* ARAMINE*) with a pH of 6, compatible with normal nasal physiology.*
Combination packages contain 1 oz ARAMINE *with* MIJIT. *Also, 1 oz. bottle with plastic dropper.*
Sharp & Dohme, Philadelphia 1, Pa.

'MIJIT' DELIVERS MEDICATION AS FINE, PENETRATING MIST, OR AS INDIVIDUAL DROPS

Equipped with a specially designed plastic nozzle, the MIJIT atomizer delivers ARAMINE Intranasal Decongestant as a fine, penetrating mist, or (when inverted) as drops. When used as an atomizer, MIJIT assures diffusion of ARAMINE in nasal passageways.

When inverted, the MIJIT may be used as a dropper for those occasions in which it is desirable to concentrate medication on the engorged epithelium of the turbinates to relieve obstruction of the nasal airways.

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RECENT ADVANCES IN MEDICINE: CLINICAL, LABORATORY, THERAPEUTIC *by* George Ernest Beaumont *and* E. C. Dodds. 13th rev. ed. 398 pp., ill. J. & A. Churchill, London. 27*s.* 6*d.*; Blakiston Co., Philadelphia. $6

PRINCIPLES AND PRACTICE OF MEDICINE *by* L. S. P. Davidson. 919 pp., ill. E. & S. Livingstone, Edinburgh. 32*s.* 6*d.*

ADVANCES IN INTERNAL MEDICINE, VOL. V, 1952 *edited by* William Dock *and* I. Snapper. 464 pp., ill. Year Book Publishers, Chicago. $10.50

Cancer

MAN AGAINST CANCER: THE STORY OF CANCER RESEARCH *by* Isaac Berenblum. 182 pp., ill. Johns Hopkins Press, Baltimore. $3

Gynecology & Obstetrics

SYNOPSIS OF OBSTETRICS *by* Jennings Crawford Litzenberg *and* Charles E. McLennan. 4th ed. 378 pp., ill. C. V. Mosby Co., St. Louis. $5.50

GYNECOLOGIC AND OBSTETRIC PATHOLOGY, WITH CLINICAL AND ENDOCRINE RELATIONS *by* Emil Novak. 3d ed. 595 pp., ill. W. B. Saunders Co., Philadelphia. $10

TEXTBOOK OF GYNECOLOGY *by* Emil Novak *and* Edmund R. Novak. 4th ed. 800 pp., ill. Williams & Wilkins Co., Baltimore. $9

PHYSIOLOGICAL BASES OF GYNECOLOGY AND OBSTETRICS *by* Samuel R. M. Reynolds. 156 pp. Charles C Thomas, Springfield, Ill. $5.50

Surgery

AFTER-TREATMENT: A GUIDE TO GENERAL PRACTITIONERS, HOUSE OFFICERS, WARD SISTERS, AND DRESSERS IN THE CARE OF PATIENTS AFTER OPERATION *by* H. J. B. Atkins. 4th ed. 338 pp., ill. Blackwell Scientific Publications, Oxford. 30*s.*

TEXTBOOK OF GENERAL SURGERY *by* Warren H. Cole *and* Robert Elman. 6th ed. Appleton-Century-Crofts, New York City. $12.50

Orthopedics

PICTORIAL HANDBOOK OF FRACTURE TREATMENT *by* Edward L. Compere *and* Sam W. Banks *et al.* 3d ed. 424 pp., ill. Year Book Publishers, Chicago. $6.50

THE FOOT *by* Norman C. Lake. 4th ed. 466 pp., ill. Baillière, Tindall & Cox, London. 25*s.*

Cardiovascular Diseases

CLINICAL PROGRESS IN CARDIOVASCULAR DISEASE *by* Herman L. Blumgart. 143 pp., ill. Grune & Stratton, New York City. $4.50

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Controls Useless Nagging Cough

Syrup 'Histadyl E.C.'° is an effective combination of:

Codeine Phosphate (1 gr. per fl. oz.)
a bronchial sedative

Ephedrine Hydrochloride (1/2 gr. per fl. oz.)
a bronchodilator

Thenylpyramine Fumarate (1 1/3 grs. per fl. oz.)
an antiallergic

and Ammonium Chloride (10 grs. per fl. oz.)
an expectorant

in a pleasantly flavored syrup acceptable to both children and adults. It is available on prescription at pharmacies everywhere.

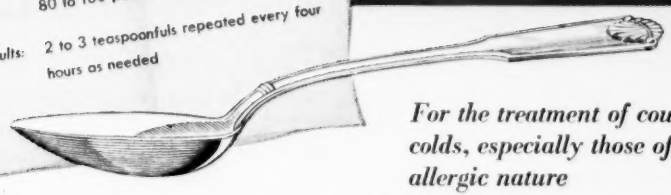
°Federal record of sale required.

Eli Lilly and Company
Indianapolis 6, Indiana, U.S.A.

DOSAGE

Children: 30 to 50 pounds, ½ to 1 teaspoonful
50 to 80 pounds, 1 to 1½ teaspoonfuls
80 to 100 pounds, 1½ to 2 teaspoonfuls

Adults: 2 to 3 teaspoonfuls repeated every four hours as needed



For the treatment of coughs and colds, especially those of an allergic nature

SYRUP

'Histadyl E.C.'

(THENYLPYRAMINE COMPOUND E.C., LILLY)

"...enough of each and every one of the

The four cardinal principles of nutrition therapy according to Goodhart

1. Early treatment
2. The use of therapeutic amounts of leading nutrients
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4. Continuous and prolonged treatment

VITERRA THERAPEUTIC provides therapeutic amounts of those vitamins, minerals and trace elements known to be necessary to assure rapid and complete restoration of an optimal nutritive state.

1. Goodhart, R. S.: Principles of Nutrition Therapy, Bull. N. Y. Acad. Med., 25:185, (March) 1949, p. 193.

J. B. ROERIG AND COMPANY • CHICAGO 11, ILLINOIS

necessary nutrients..."[1]

EACH CAPSULE CONTAINS

VITAMIN A	25,000 U.S.P. Units
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VITAMIN B_{12}	5 mcg.
VITAMIN B_1	10 mg.
VITAMIN B_2	5 mg.
NIACINAMIDE	100 mg.
VITAMIN C	150 mg.
CALCIUM	103.0 mg.
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COPPER	1.0 mg.
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MAGNESIUM	6.0 mg.
MANGANESE	1.0 mg.
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LUMBAR DISC LESIONS: PATHOGENESIS AND TREATMENT OF LOW BACK PAIN AND SCIATICA *by* James Rowan Armstrong. 227 pp., ill. E. & S. Livingstone, Edinburgh. 42*s*.

OPERATIVE NEUROSURGERY, WITH EMPHASIS ON PROCEDURES IN TRAUMA *by* Elisha Stephens Gurdjian *and* John E. Webster. 422 pp., ill. Williams & Wilkins Co., Baltimore. $10

Dermatology

SKIN THERAPEUTICS: PRESCRIPTION AND PREPARATION (MATERIA MEDICA DERMATOLOGICA) *by* M. K. Polano. 276 pp. Elsevier Publishing Co., Houston, Tex. $6.50

HANDBOOK OF TROPICAL DERMATOLOGY *by* R. D. G. Simons. 2 vols., 845 pp., ill. Elsevier Press, Houston. $15

Radiology

PHYSICAL FOUNDATIONS OF RADIOLOGY *by* Otto Glasser *et al.* 2d ed. 581 pp., ill. Paul B. Hoeber, New York City. $6.50

INFRARED PHOTOGRAPHY IN MEDICINE *by* Leo C. Massopust. 63 pp., ill. Charles C Thomas, Springfield, Ill. $2.75

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OESTROGENS AND NEOPLASIA *by* Harold Burrows *and* Eric S. Horning. 189 pp., ill. Blackwell Scientific Publications, Oxford. 30*s*.; Charles C Thomas, Springfield, Ill. $6.75

THE SPREAD OF TUMOURS IN THE HUMAN BODY *by* Rupert Allan Willis. 2d ed. 447 pp., ill. Butterworth & Co., London. 63*s*.

to prevent attacks in angina pectoris

Effective in 4 out of 5 cases — Fewer anginal attacks were suffered by 78.4%[1] and 80%[2] of patients for whom Peritrate was prescribed on a continuing daily schedule. Taken regularly as a prophylactic measure (rather than when attack is present or imminent), Peritrate will often help to

1. reduce the number of attacks
2. reduce the severity of those attacks that are not prevented
3. reduce nitroglycerin dependence
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New, long-lasting oral vasodilator — Unlike older, shorter-acting nitrates, Peritrate is slowly absorbed and long-lasting, each dose providing 4 to 5 hours protection against attacks. It is virtually nontoxic. Mild, transitory side effects occur rarely and are easily controlled. Tolerance has not developed in patients studied

Dosage: Usually 1 tablet 3 or 4 times daily. Available in 10 mg. tablets in bottles of 100 and 500. Literature and samples on request.

1 Humphreys, P., et al.: Angiology 3:1 (Feb.) 1952.
2. Plotz, M.: N.Y. State J. Med. 52:2012 (Aug. 15) 1952.

Peritrate® TETRANITRATE

(BRAND OF PENTAERYTHRITOL TETRANITRATE)

WARNER-CHILCOTT

Laboratories, NEW YORK

Patients... I have met

● *The editors will pay $1 for each story published. No contributions will be returned. Send your experiences to the Patients I Have Met Editor, MODERN MEDICINE, 84 South Tenth St., Minneapolis 3, Minn.*

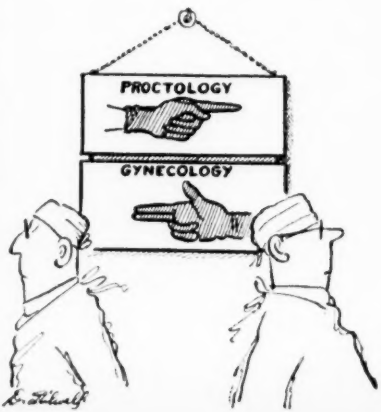
Not Cumulative

A horse-and-buggy doctor in our community was widely known for his disregard for what he termed "new-fangled folderol." He seldom read a medical journal and he used the same technics he had learned years ago in medical school.

During one of his rare attendances at a medical meeting, he interrupted a younger doctor's discussion of an unusual and difficult case to say that the correct diagnosis was "obviously" just the opposite of what the younger man had said.

"I don't care what the lab reports show," thundered the old-timer. "I have had fifty-one years of experience in the practice of medicine."

"Could it be possible," questioned the young man softly, "that you have had but one year's experience fifty-one times?"—R.O.B.



NOW. . . a penicillin compound that offers

prolonged blood levels from each dose

Permapen*

DIBENZYLETHYLENEDIAMINE DIPENICILLIN G

ORAL SUSPENSION

effective concentrations . . . longer action

Demonstrable blood levels for *eight hours* from a single 5 cc. dose of PERMAPEN Oral Suspension.

meals don't interfere with blood levels

Fasting patients and patients taking PERMAPEN with meals will have comparable blood levels within one hour following administration.

good tasting direct from bottle

Taste-conscious youngsters and adults will like the appealing peach flavor of PERMAPEN Oral Suspension. There is no bitter aftertaste. And PERMAPEN comes prepared and ready for use.

no refrigeration needed

PERMAPEN Oral Suspension is stable at room temperature for 24 months.

Supplied in 2-ounce bottles. 300,000 units per 5 cc. teaspoon.

AQUEOUS SUSPENSION

New, for deep intramuscular injection, PERMAPEN Aqueous Suspension, in 600,000 unit STERAJECT* Cartridges. Just one injection of this unique penicillin compound provides demonstrable blood levels for as long as 14 days.

another new product from

Pfizer ***world's largest producer of antibiotics***

ANTIBIOTIC DIVISION, CHAS. PFIZER & CO., INC., BROOKLYN 6, N.Y.

*TRADEMARK, CHAS. PFIZER & CO., INC.

NON-NARCOTIC...NON-BARBITURATE...NON-ACID

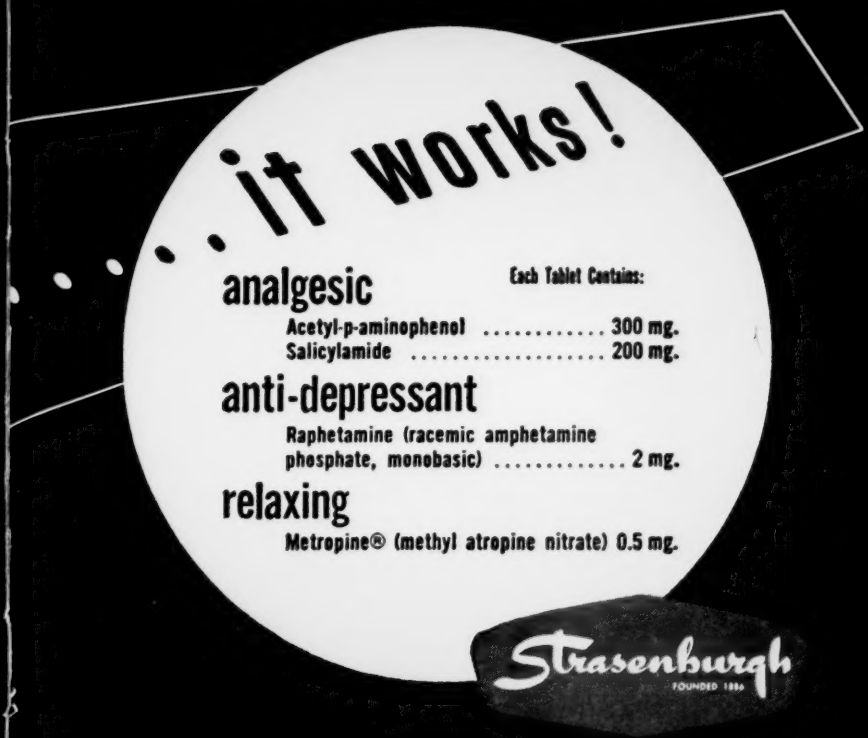
Strascogesic acts directly in three ways, maintaining its effect for 3 to 4 hours.

...Provides rapid and effective analgesia

...Markedly improves patient outlook

...Relaxes tension

Strascogesic is exceptionally well tolerated and of particular value in the treatment of dysmenorrhea, rheumatic and low back pain, muscle and joint pain, headache, colds and grippe. Average adult dose, 1 to 2 tablets every 3 to 4 hours.



ROCHESTER 14, N.Y., U.S.A.

Not Detachable

A cardiac patient preparatory to leaving asked, "And when shall I come back with my heart, Doctor?"

I couldn't resist. "Bring it with you the next time you come," I answered.—H.C.V.

Good Neighbors

It was a big day for the professor of medicine. His wife was delivered of her third child the same day that his first book was published. The professor had no doubts about which took precedence. When a friend congratulated on the "proud event" he answered, with a broad grin, "I never could have done it without the help of two of my graduate students."—A.L.

Hard Fare

One of the inhabitants of skid row had ended up in the hospital. One of the nurses took his temperature and recorded it on the chart. When I came in the old boy looked so pinched and bleak, I asked if he had eaten lately.

"The lady gave me a piece of glass to suck," he replied, "but I'm still mighty hungry."—R.B.

"It was a baby."

the ***most widely used***

ethical specialty for

care** of the **infant's skin

DESITIN®

OINTMENT

the pioneer external cod liver oil therapy

Decisive studies[1,2] substantiate over 25 years of daily clinical use regarding the ability of Desitin Ointment to . . . . . *protect, soothe, dry and accelerate healing in . . .*

- **diaper rash**
- **exanthema**
- **non-specific dermatoses**
- **intertrigo**
- **prickly heat**
- **chafing**
- **irritation**

(due to urine, excrement, chemicals or friction)

Desitin Ointment is a non-irritant blend of high grade, crude Norwegian cod liver oil (with its unsaturated fatty acids and high potency vitamins A and D in proper ratio for maximum efficacy), zinc oxide, talcum, petrolatum, and lanolin. Does not liquefy at body temperature and is not decomposed or washed away by secretions, exudate, urine or excrements. Dressings easily applied and painlessly removed.

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1. Heimer, C. B., Grayzel, H. G. and Kramer, B.: Archives of Pediat. 68:382, 1951.
2. Behrman, H. T., Combes, F. C., Bobroff, A. and Leviticus, R.: Ind. Med. & Surg. 18:512, 1949.

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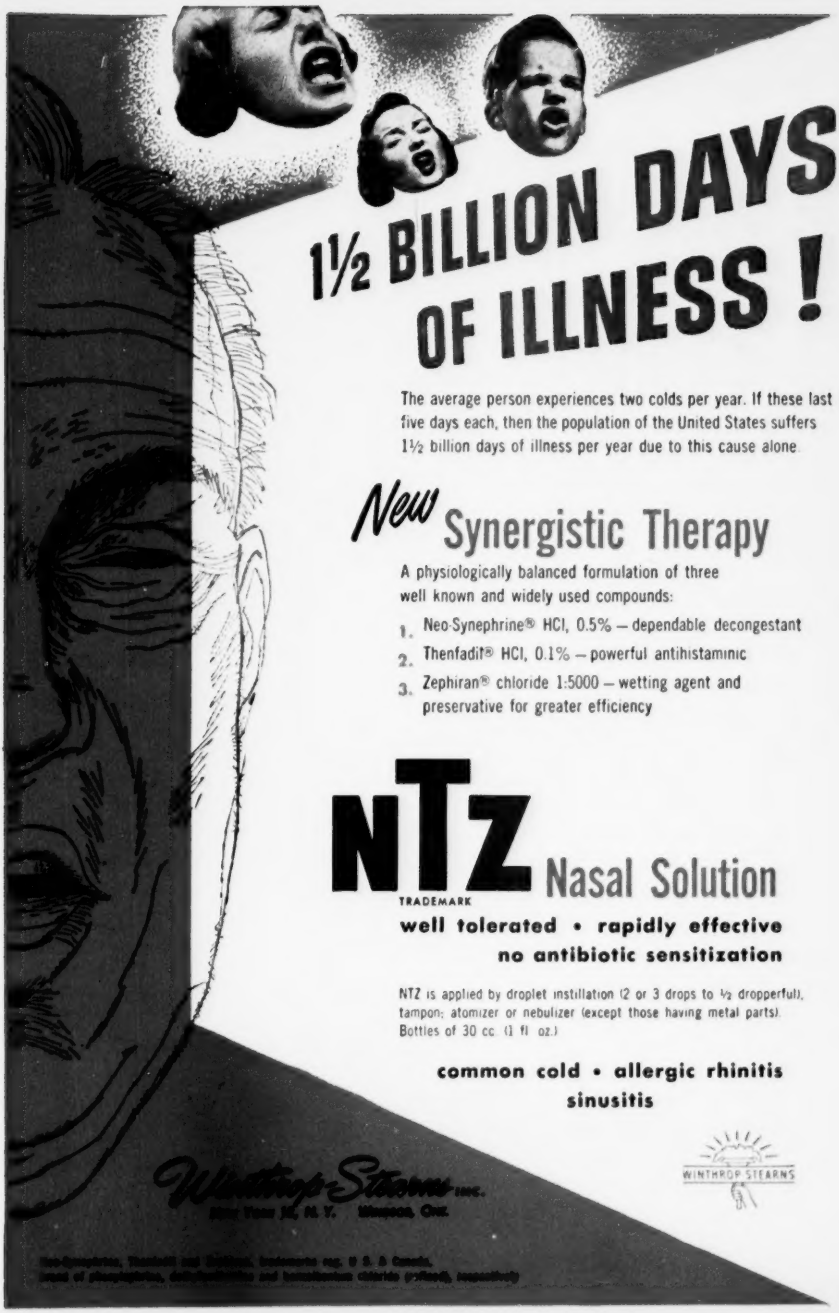
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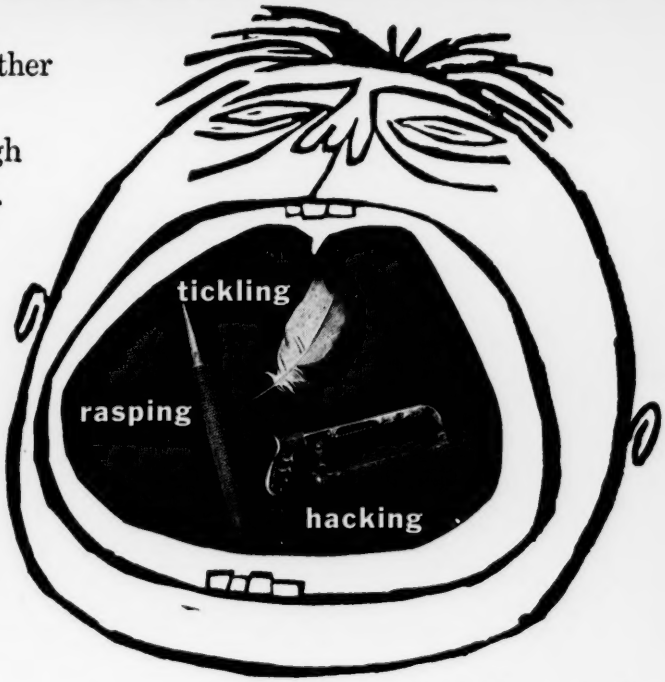

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